Innovative next-generation platform for enterprise growth

The Infor® OS Technology Foundation is the design, development, and runtime execution environment for the next-generation Infor applications. Infor OS is a technology platform strategy that prescribes a set of guidelines for all Infor applications and technology products, as they move to the next generation. It includes core guiding principles that must be implemented for an application to be certified as “Infor OS,” and includes several components that come together and operate as a single unified technology stack in the development and runtime environment. The Technology Foundation includes:

- Infor Landmark Technology
- Infor Ming.le™
- Infor BI
- Infor Security
- Infor Business Vault
- Infor Reporting
- Infor ION®
- And more

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Next-generation technology

Infor OS is our next-generation technology for business applications that's built to drive compelling competitive advantage and growth for the enterprise. By exploiting consumer-oriented styles and technologies, this innovative platform enables new and more effective ways of working in today's digital workplace, helping to increase employee engagement and organizational agility.

The OS Technology Foundation implements core principles of modern architecture commonly articulated by leading industry analysts, consortiums, and thought leaders—such as Open Platform 3.0 by The Open Group, Nexus of Forces by Gartner, and The Third Platform by IDC. It successfully takes advantage of the converging forces of information, analytics, mobility, social business, and cloud computing and empowers users like never before to interact with business applications and each other. Together, these elements combine to help the OS Technology Foundation innovate, transform, and accelerate the adoption of new patterns and business process improvements that can help organizations achieve compelling business value.

Experience users love

Infor OS strikes a balance between simplicity, speed, security, reliability, and performance to deliver a smart software experience users love. Every aspect of the experience of a business solution—from design to use in production—is improved, modernized, and simplified. Applications feel more natural, meaningful, and enjoyable, which helps turn information into quick decisions, and decisions into fast actions. Infor OS leverages Infor SoHo, which takes a holistic approach to user experience that results in happier users and greater efficiency for your organization. Infor OS applications include Role based home pages, search, contextual navigation, temporal views, effective data processing, social collaboration, and embedded analytics, which all help to improve the user experience.

Work anywhere

Whether your software is deployed in the cloud, in a private cloud, or on-premise; whether you are working from your corporate headquarters, home office, or on the road, Infor OS Technology Foundation makes it possible to access your applications securely and reliably. The thin web client user interface is *ubiquitous*, graphically rich, and executes on multiple devices with a choice of popular browsers—Microsoft® Internet Explorer, Google® Chrome, and Apple® Safari. Built on the power and elegance of HTML5, JavaScript, and JSON, the interface is multi-faceted and intelligently crafted using Infor SoHo usability standards. The principles of responsive web design are implemented to deliver an optimal viewing experience across desktop, tablets, and mobile devices.

Access anywhere

Pervasive APIs in the OS Technology Foundation represent a major leap forward in how APIs are put to use to drive innovative consolidation of application services. Programmatic access is available through SOAP based or RESTful web service APIs, which are designed to quickly and efficiently process and return information. All application interfaces are open to API-based access. In addition to API access, data interchange is enabled using Infor ION, an intelligent open network technology that integrates applications with intuitive purpose built middleware. OS Technology Foundation APIs will be tightly integrated with ION APIs such they can be exposed as an ION API dynamically via the configuration console, by tenant, with no code changes.

Deploy anywhere

Architected for the Internet, the OS Technology Foundation and business applications may be securely deployed globally in the cloud or on-premise. Unicode support is built in for global languages and data translation capability is available for all major world languages. Not only does the user interface present itself in the language of choice, data entered may be stored in multiple languages. For example, when entering a field, the user may select the language in which the data is entered, maintained, and stored.

Secure everywhere

A significant percentage of security breaches are due to insider attacks and clever outsiders. However, having security policies defined at a metadata level and embedded within the executing business objects provides not only better security, but also the ability to respond to attacks with speed. This is why the OS Technology Foundation embeds security policies into the business objects themselves. This revolutionary pattern is implemented to provide strong authorization that is resilient no matter where an attack originates—inside or outside the organization or from any device. Policies may be added, updated, or changed in memory and applied immediately in runtime. In addition, security policies may be defined by tenant, by role, and by individual user.

Role-based access

Infor OS applications add innovative role-based capabilities that help engage employees intuitively and transform their software experience. Role-based Home Pages pay attention to every role involved in an automated business processes—not just the popular employee, manager, or requestor roles. A Home Page is a tailor-made, responsive interface for a role that presents actions, tasks, to-dos, alerts, intelligence, information, contextual navigation, and links are presented in a unified, single page interface. It makes it easy to find and do work. Well thought out home pages and landing pages for a number of roles have been created, packaged, and delivered with the Infor OS applications. Extensibility features permit customers and tenants to add or modify roles and the modify roles and the landing pages and the interfaces associated with the roles.

Social access

Leveraging Infor Ming.le social technology, which marries communication and business processes, Infor OS Technology Foundation enables users to work smarter and faster. It changes the way business teams engage, both internally and with external stakeholders. It fundamentally changes the way work gets done by rewiring the way users spread, consume, and use information from their application system and from each other. Features like Paparazzi deliver automatic notices based on user-defined parameters and enable users to “follow” application objects and the activity of the associated people. Information in the form of alerts, notifications, and to-dos proactively inform users and help them to act more quickly.

Mobile access

The OS Technology Foundation opens a world of mobile options with responsive web design and innovative, purpose-built mobile apps. Whether you are checking inventory, approving orders, monitoring system alerts, or collaborating, the viewing experience adapts to your device—bringing state-of-the-art mobile interfaces to life that seamlessly and securely integrate with your core systems.

Pervasive auditing

The OS Technology Foundation enables auditing pervasively throughout the business application system. In other words, every user action is audited and stored. Users get immediate visibility into past activities at their fingertips. This feature can help speed any risk investigation, and help reassure risk managers and internal auditors.

Proactive and continuous monitoring

The OS Technology Foundation delivers tools for automatic and continuous monitoring of application data, user activity, and system functions. The System Console tool monitors system activity; Security Services monitors user activity; and Continuous monitoring tools monitor the business application—transactions, master data, configurations, and user access rights. These tools can be instrumental in instilling a culture of compliance and efficiency by enlisting employees across various functions—including business, IT, HR, and audit—to monitor, identify, assess, and respond to risks. By automatically monitoring on a continuous basis, companies empower their employees, give them immediate visibility into risks, and help them prevent or mitigate risk in a timely manner.

Continuous monitoring tools use rules to monitor data for anomalies, non-compliance, or risky conditions (such as a transaction entered for an entity that is on a denied party list by a regulatory authority) and immediately raises an alert or stops further processing until the situation is attended to and corrected. Such proactive monitoring helps improve productivity and helps stop small problems from turning into big headaches

Architecture of the Internet

Unified computing system

The OS Technology Foundation unifies applications into a seamless computing system. Different components live in the cohesive platform, which is managed as a single unit. The single unit is simpler to update, deploy, execute, and manage.

Whether employees are being paid, supplies are being dispensed, invoices are being approved, or expense trends are being analyzed, all application services are built on a common information model. Business rules, business processes, and business analytics cohesively engage and drive solution functionality. The execution framework is built in Java to create a largely homogenous architecture that has a common interface and a common object model. The unification helps reduce the total cost of ownership and improve performance, scalability, and user experience.

In-memory Java object model

Java is a powerful modern language that enables applications to be modular, configurable, flexible, and extensible. By leveraging Java and incorporating contemporary design patterns and in-memory processing innovations, the Infor OS Technology Foundation delivers a platform suited for high availability and high performance. One of the main innovative patterns used is the execution of metadata on top of a pre-built Java framework. Metadata describes the objects, the relationships, the rules, the business logic, the business process, and the analytics—all aspects of the application in its entirety. Defined in a domain specific, specification- based Pattern Language, the metadata is parsed into memory in Java data structures. The data structure objects drive the Java framework and execute in memory.

Embedded process automation

Business process automation is uniquely embedded in the architecture. Process flows use consistent objects and common services without the need to translate, transform, or repeatedly align. Process automation tools may be used to extend, re-define, adapt, and where necessary, optimize workflows to suit the business.

Amplified configurability

Infor OS Technology Foundation is designed from the ground up with configurability in mind. It gives users control over a variety of application behaviors—from personalizing the interface, business objects, languages, and security policies, to the creation and management of business processes and integrations. Easy-to-use tools are provided to point-and-click, drag-and-drop or script changes. This helps make Infor OS:

- **Flexible**—Tenants can configure the system metadata to suit their business and organization needs. In addition, individual users can personalize the metadata to suit their individual needs.
- **Extensible**—Metadata configurations extend and override the core object model that is predefined and delivered for an application. These extensions are adaptable to updates of the core.
- **Dynamic**—Objects are dynamically configurable in memory. Metadata may be updated in the production system during runtime (hot updatable). Updates immediately take effect without bringing the system down.
- **Separate**—Configurations are separated by tenant and by user, and are independently maintainable.

Configurable Grid and Open Source

Infor OS Technology Foundation helps reduce the total cost of ownership for on-premise and cloud deployments by embracing open source application servers and open source relational databases. By optimally wrapping these technologies with added technologies and services, Infor offers a highly scalable and highly available system with reduced system management overheads. No burdensome, complex licensing for deployment in a private cloud or on-premise is necessary.

Cybersecurity

The OS Technology Foundation security architecture is built for Internet access and is more resilient to external attacks and internal risks. Layers of protection are provided in the architecture; these range from secure platform services to granular application and web services. Infor Security enables collaboration across multiple systems, networks, and organizational units in different trust realms. In addition, the OS Technology Foundation includes web application security that enables strong authentication and embedded authorization procedures. The security architecture provides identity management, web single sign-on, and API security for customers, partners, and employees using any device. Geo-aware and network aware capabilities make it possible to apply advanced rules and policy checks based on where the user is logging in. The security architecture supports several identity standards, including SAML, WS-Federation, WS-Trust, OAuth, and SCIM.

Dynamic horizontal and vertical scaling

The OS Technology Foundation implements scale up and scale out capabilities to provide more optimal response times and a better operational experience. The applications may execute in physical or virtual server environments, optimizing hardware power. Infor Grid technology is used to manage multiple Java Virtual Machines (JVM) running on multiple servers. Tenants execute in their own JVM, avoiding collision and allowing them to independently recover from failures. JBoss technology is engineered to execute multiple services on one or more horizontally clustered servers.

Infor Grid technology enables multiple application servers to execute on one or more clustered operating systems. In addition, database access is abstracted to make it possible to take advantage of database clustering, replication, and distributed storage capabilities.

High availability and performance

The OS Technology Foundation introduces new concepts that significantly change the way applications are deployed in the cloud and on-premise. In addition, system monitoring and data administration tools help ensure timely detection and quick recovery from failures.

Built to perform optimally in the Amazon® Web Services platform and on-premise, the architecture provides several tuning options to fit business availability, performance, and scalability needs. In the OS Technology Foundation, all servers are “active” as all servers in the configuration can take traffic all the time. Tuned scaling options enable a highly available system with very limited, if any, down time.

Online activity is managed by JBoss clustering capabilities, which enable multiple application server processes to provide service on multiple servers. In case of a failure, the user is automatically routed to another available application server.

Batch execution is decoupled from business logic, which is load balanced across the grid and is highly available so the failure of any grid node is handled transparently.

Always on the latest release

In the cloud, OS Technology Foundation is designed to provide every tenant with a dedicated share of the application instance, including its data, configuration, user management, and tenant individual functionality. This means that each tenant shares the same code and all tenants are always current on the same, latest version of the software. Tenant-specific configurations are preserved as software is updated. And tenants keep pace with software and environment updates. The data area is per tenant and not co-mingled to protect tenant information and to support tenant policies for data governance— backup, recovery, and disaster recovery.

In the production environment, services and servers are tenant agnostic; this means that all servers are available to serve tenants, which helps improve availability. Services are multi-tenant per Java Virtual Machine to protect other tenant from a tenant-specific failure.

Prebuilt integrations

Leveraging the power of Infor ION, the OS Technology Foundation provides prebuilt integrations using open, non-proprietary standards like OAGIS (industry-standard XML). This helps ensure that independent applications talk to each other in the same common standard. The platform loosely couples systems together so they speak the same language, but are not dependent upon each other. Much like the Internet, one application can be upgraded, replaced, or even fail without taking down the entire network—providing an open architecture that is flexible, scalable, and adaptable.

Turbocharging business solutions

Pervasive effective dating

With most architectures, if users want to view data and activity from the past, they've generally had no choice but to run reams of historical reports and manually correlate data to make sense of what might have taken place. No more. The Infor OS Technology Foundation takes working with the level of time to a whole new dimension of application usability. It provides temporal views of the history of source data. But that's not all. Users may enter future dated transactions that take effect when the date is reached. This activates a temporal view of the application system and data "as of" date. As of date processing allows users to view or process temporal data and transactions. When an "as of" date is set, the system provides all data and related data as of that date. Think of it as going back or forward in time and working with the system in an integrated and reliable way.

Pervasive attributes

Users can configure business objects and attributes. They can add a new business class or attribute to extend the system based on their business needs. Once configured, these updates are pervasive throughout the system—in interfaces, APIs, processes and reports. No programming or costly customizations are necessary. Since the system is metadata driven, the framework recognizes the changes and behaves accordingly.

Search

Powerful search functionality has been implemented to help users find the information they need. Text searches can be used for quick access to records. Infor Enterprise Search may be used to scan through multiple data sources and stores of information.

Request actions

Request Action is an innovative feature that provides the ability to automate user requests. It is different from standard application workflows because it is pervasive across business objects and reduces the need for application security setup. For example, a user may request the creation of a new location or item. The traditional approach is manual and requires the requester, who does not have security access to online application forms, to fill out a paper form and send it to an appropriate authority in the company. The Infor OS Technology Foundation automates this process. The user electronically fills out a "Request Action" form associated with the business object. That is automatically routed for approval and action in a fast, efficient, and reliable manner—eliminating duplication, support calls, and unnecessary latency in the business process.

Actors and relations

The Infor OS Technology Foundation implements a number of pervasive patterns. Actor, for example is a business object implemented at the common framework layers that is extended by applications. An Actor may be an employee, customer, vendor, or applicant. What makes the model powerful is that the relationship is leveraged across multiple application functions and processes.

It is possible to gain visibility into the activities of a person as an employee and as a customer. The unified approach benefits not only application processes but also security, workflow, and master data. It helps eliminate duplicate records, multiple setups, and siloes of information that make maintenance difficult and time consuming.

Organizational structures

Objects associated with organizational structures, groups, and teams are implemented at the base common framework level; this makes it possible for multiple applications to leverage the objects. Whether assessing unit financials, preparing budgets, or routing tasks for approvals or securing data, multiple business processes leverage the centrally maintained structure. The notion of present and future structure makes organizational transformation smoother, since it doesn't require an expensive restructuring of data or reimplementation.

Localizations

Leveraging the power of Infor ION and Infor Local.ly, the OS Foundation Technology enables localization for tax calculations, capturing: local tax structures, rates, and rules; electronic payment and receipts communication; and statutory, regulatory, and cultural reporting. This makes it easier for users around the world succeed to meet compliance requirements.

Faster time to insight

Report anywhere

The Infor OS Technology Foundation embeds reporting capabilities, empowering users with convenient and pervasive functions. The implementation of a Report Anywhere pattern allows users to view objects and lists and print them anytime and from any device. There are two types of reporting functionality—Live reports and Purpose-built standard reports. Purpose-built reports may be scheduled, received, and automatically distributed to quickly disseminate critical information.

Live reports

Live reports allow users to view data and lists using a web browser or mobile device, then at a touch of a button output to PDF or CSV format for storing, printing, or export to Microsoft Office. This functionality is based on specifications stored in metadata and is configurable using the Configuration Console. All objects and lists are delivered in standard specifications, which users may reconfigure or create. Users can also create and print a range of reports originating from simple lists, multi-nested lists, and extended lists using object relations.

Big Data

The Infor OS Technology Foundation has been designed for the exponential growth in both structured and unstructured data and provides an integrated data platform that stores transaction, master data, attachments, and analytics content. At the same time, data is served continuously to the Business Vault, a Big Data store, which provides unparalleled speed, flexibility, and reliability to reporting and monitoring processes.

Continuous Control Monitoring tools may analyze analyzes the data for anomalies and business exceptions that impact performance, regulatory compliance, and risks. Infor BI consumes the data to build integrated analytic views that provide intelligence across system boundaries.

Real-time embedded analytics

Traditionally, analytic capabilities have resided outside of the business application. With the Infor OS Technology Foundation, analytic capabilities are embedded in the application, which helps users get deeper insight more quickly. The integration of a business intelligence (BI) platform with the application architecture enables users to interact with information without switching context. It supports a decision or action in the context in which that decision or action takes place. Whether users are entering transactions or pondering key metrics, a single page delivers the experience. Business objects and analytics are contextually always together. Users can navigate with ease, drilling to data details from analytics or to related analytics from business object data.

Finally, users are relieved of the burden of executing ETLs to external repositories and preparing analytics and dashboards for consumptions. The Infor OS Technology Foundation provides prebuilt cubes that are configurable in real time, and that execute in memory. As transactions occur, automated processes refresh the analytics and keeps users engaged at the speed of business. Users can work more efficiently in the applications they use every day by getting relevant information and analytics for the task at hand.

The Infor Cloud built on AWS The secret ingredient for business agility

Achieving Cloud 3.0 level business software performance demands more than servers and software - it takes a unique combination of technologies and services, designed, built, and optimized to satisfy mission-critical, enterprise grade computing requirements. The Infor cloud built on Amazon Web Services (AWS) offers you just that - the best available cloud infrastructure, network services, and application designs - so you get the reliability you need to trust your business to cloud-based software.

Infor Labs - A strategic tool for modernizing your technology footprint

Infor Labs is a strategic team who can modernize your technology footprint in a way that achieves value quickly while minimizing risk—both during the deployment process and after go-live. It gives you complete choice in enterprise solution deployment options, from cloud to hybrid.

In summary

The Infor OS Technology Foundation is an architecture that provides choice, flexibility and performance. Users can deploy it on-premise or in the cloud globally, and work from anywhere with any device. The Foundation's simplified, homogenous computing architecture enhances reliability, while metadata based, dynamic in-memory execution helps improve performance.

The tenant agnostic services deliver exceptional scalability. Embedded security protects against both internal and external attacks. Continuous monitoring and pervasive auditing help users immediately respond to system and application anomalies and risks. Embedded analytics and pervasive effective dating provide enhanced visibility and power.

Overall, the Infor OS Technology Foundation offers best-in-class technology with signature features to help fuel enterprise growth.

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Silver
Channel Partner

641 Avenue of the Americas, New York, NY 10011

INF-2065031-en-US-0918-1

Eclipse Group
Tel: +44 (0)203 866 8800
Email: enquiries@eclgrp.com
www.eclgrp.com