FNT
// simplify complexity

Configurable data imports, exports, and transformations

High performance reconciliation and delta calculation

Efficient software integration framework across all Telco, Data Center, and Enterprise IT market segments

Event-driven data exchange across system boundaries

FNT IntegrationCenter

One tool for a wide range of integration needs

Modern system landscapes include hundreds of applications and software systems, often installed as multiple instances at multiple locations. Two of the biggest obstacles to managing these complex systems are the huge variety of data involved and its decentralized storage. When important information is siloed, it is not accessible to all the systems that need it. Cross-departmental processes therefore cannot work properly, if at all. Full integration of the various systems and applications deployed within an organization is critically important to ensure data is shared among them.

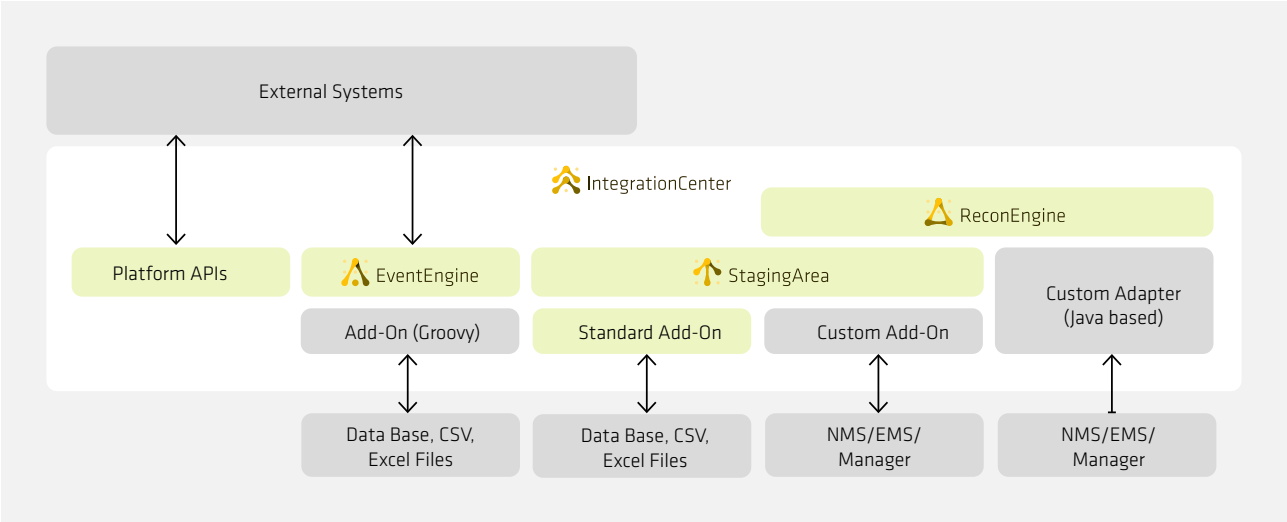
ONE SOLUTION, MANY POSSIBILITIES

FNT IntegrationCenter is a software integration framework that simplifies integrating the FNT Command Platform with other systems. It's a powerful tool for managing the communication and movement of data between FNT Command and different software applications. The FNT Command Platform documents and manages a business' hybrid infrastructure core. This critical infrastructure data is maintained in FNT Command's unified data repository of physical and virtual assets and resources, configuration and services data, and logical dependencies. FNT IntegrationCenter makes this information usable throughout the company via the applications of their choosing, effectively eliminating silos that isolate data. FNT IntegrationCenter is the tool that FNT uses itself to build our standardized integrations, the FNT Adaptive Interface Packages, which can be licensed and used independently by our customers.

FNT IntegrationCenter provides both the model for how information about the infrastructure moves between the various applications a business uses and the means to move it. Not only are businesses free to use their preferred tools for different tasks, but they can do so with the confidence of knowing that the data flowing through their applications is up to date and accurate because it is documented and managed with FNT Command.

A COMPLETE SOLUTION

FNT IntegrationCenter is comprised of four distinct functional blocks: FNT StagingArea, FNT ReconEngine, FNT EventEngine, and FNT Platform APIs. Individually, each component serves a specific purpose. Collectively, they deliver all the functionality needed for virtually any data integration scenario.



FNT IntegrationCenter architectural overview

FNT StagingArea: Graphical Modeling of Interfaces
The FNT StagingArea component of FNT IntegrationCenter supports graphical ETL-based processes with automated data synchronization, high levels of standardization, and built-in plausibility checks. A visual editor makes it possible to model and manage interfaces to many different systems without the need for specialist programming skills. Data can be easily extracted from various system silos and joined with other data in FNT Command's unified data repository. This creates a solid foundation of information for managing IT infrastructures and business services in a holistic, coherent manner.

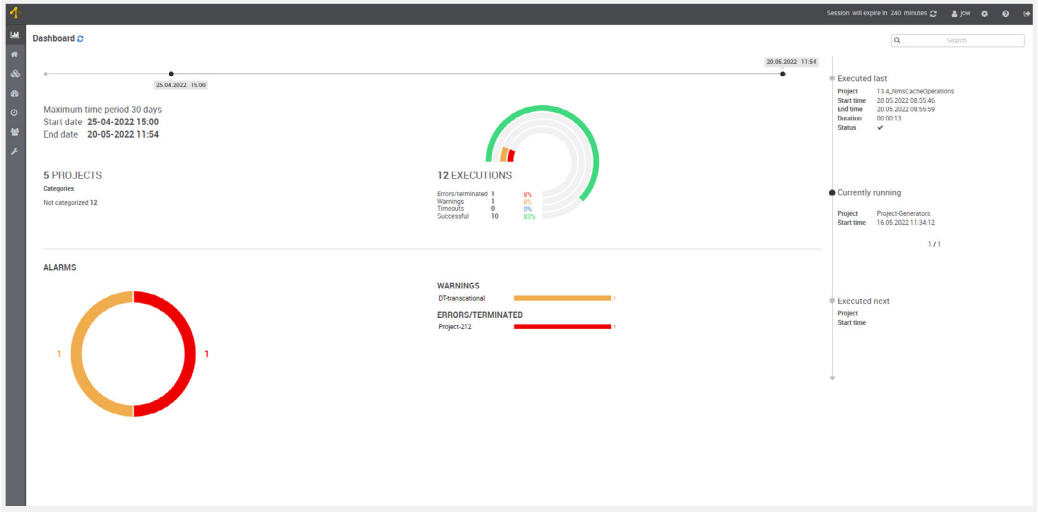
Using a controlled ETL process, data is extracted and transformed, then checked and loaded based on the specifications and rules of the target system. This greatly simplifies the implementation of interface projects while ensuring a high degree of standardization and data quality. In combination with the FNT ReconEngine, a range of additional features is available to enable the efficient implementation of data reconciliation applications.

FNT StagingArea supports in-depth, standardized integration with the FNT Command Platform, enabling full documentation of all required data in a single, centralized system. This allows users to directly access the information they need, for example, to compare planned values and scenarios with imported data.

Supported processes include:

- Data processing via Business Gateway Entity
- SQL based database alignment
- File Export and Import (Excel, XML)
- HTTP based data data exchange (all kind of HTTP based data exchange is possible from FNT StagingArea 7.6 on)

FNT ReconEngine: Ensure the Integrity of Imported Data
Checking and correcting data from the network is vital for keeping the data in an inventory system up to date and accurate. Without data integrity, any undertaking that relies on the data in question is doomed to fail.



Dashboards show the overview of interface executions

Planned and documented resources must be in sync with real resources to ensure new planning cycles are based on actual installed resources. Any data being moved should be checked for accuracy, and any discrepancies should be identified and resolved. This is the value FNT ReconEngine contributes to integration projects. It plays a vital role in keeping network device and topology information up to date by finding and fixing any issues with target data that is moved into FNT Command.

FNT ReconEngine executes multiple steps to ensure data quality. It begins with Data Loading, which includes the execution of a source system-specific adapter that retrieves data, transforms it, and stores it in a Delta Cache. In addition to a source system-specific adapter, FNT StagingArea and other external applications can be used to populate the Delta Cache using the REST API of FNT ReconEngine.

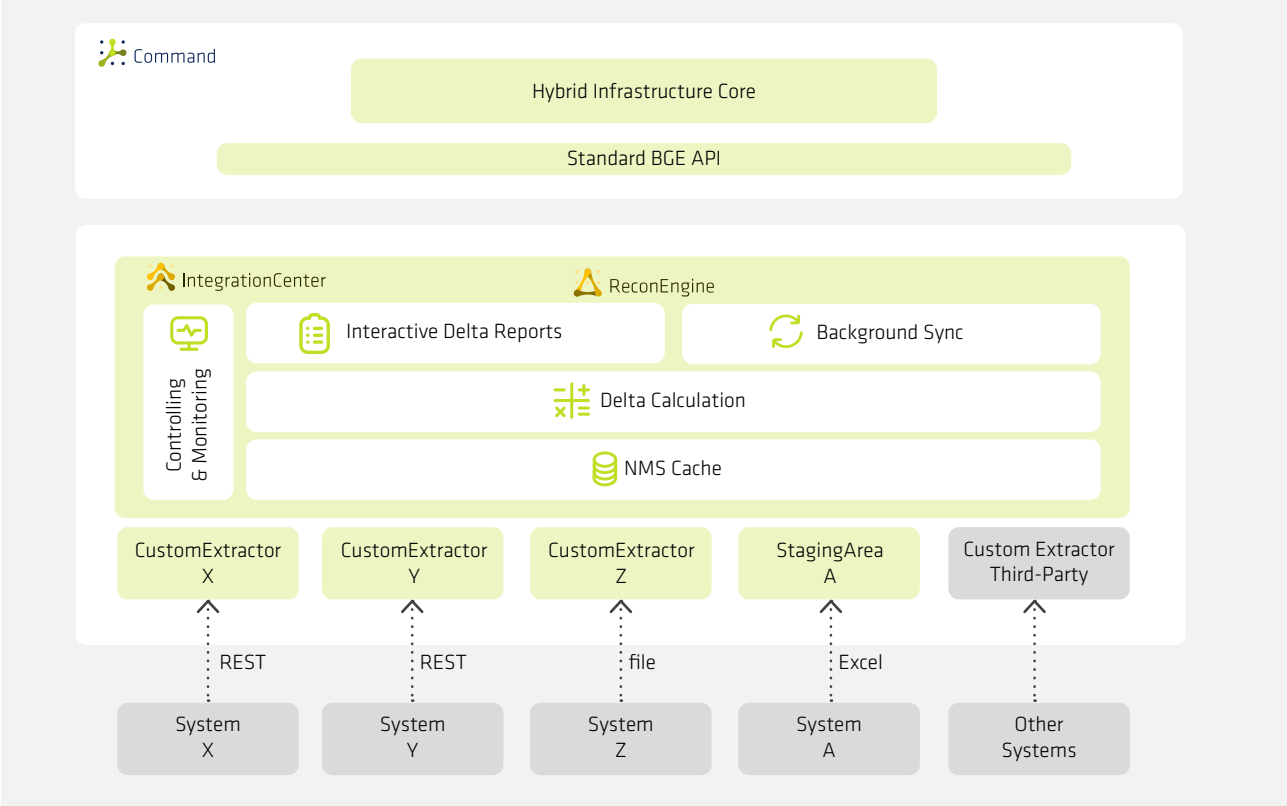
While there are no limitations on where data can be extracted from, the most common sources are NMS / EMS Manager, other databases, and Excel / CSV files. The next step is Delta Calculation, during which the discrepancies between FNT Command data and the source system data stored in the Delta Cache are identified and stored in a Delta Report table. Finally, Synchronization takes place. This is when discrepancies detected during Delta Calculation are corrected using the FNT Command Business Gateway Entities. The result is data aligned with the FNT Command database and, equally as important, the ability to create high-performance network inventory reconciliation interfaces using a predefined set of functions and features aiming to reduce the interface implementation time to a minimum.

FNT ReconEngine is fully integrated with FNT StagingArea, so it can be populated with data and delta calculation can be triggered by FNT StagingArea. Furthermore, this integration is what enables the interface developer to focus explicitly on the modeling of the ETL Process in the Staging Area and use the ReconEngine features to reduce interface development costs dramatically. The discrepancy calculation and the auto-apply rule configuration and execution in the ReconEngine is one example. The utility of each individual component of the solution contributes to the common solution for integrations as a whole.

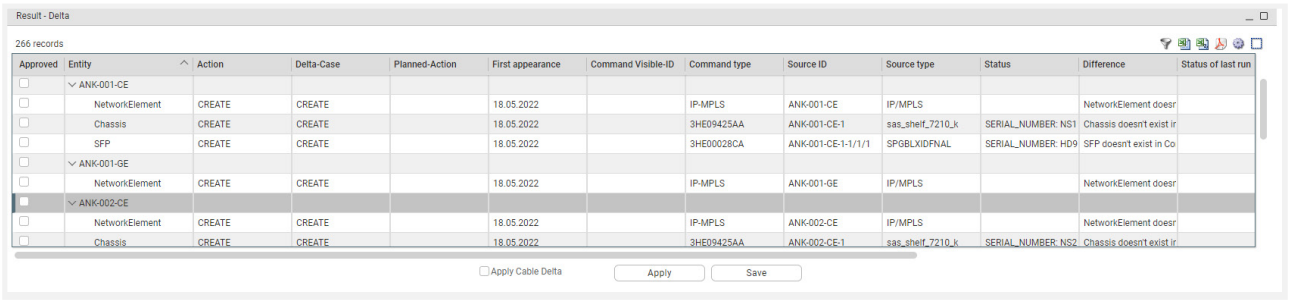
FNT EventEngine: Enrich Events for Multiple Use Cases
The FNT EventEngine is connected to the FNT Command Message Bus to fetch different events. Events are generated by a user action in FNT Command, for example placing a shelf. After enrichment by Groovy Scripts, these events can be filtered and forwarded to external systems such as:

- Workflow Management
- Order Management
- Ticketing System
- Many others

FNT EventEngine can also listen to events from external systems and react accordingly. These external events can trigger operations configured in the EventEngine. Because it is connected to FNT's Business Gateway Interface, it is possible to trigger any BGE operation by an incoming Event.



FNT ReconEngine architecture



FNT ReconEngine Delta Report

FNT Platform APIs: Integrate External Software Systems and Applications

The first three components of FNT IntegrationCenter deal with moving and synchronizing data. The final element, which ties them all together, is the interfaces that provide the means for the data to move and is the basis for all of them. FNT APIs are predefined interfaces and function calls that encompass a wide range of options for connecting and exchanging data. They come equipped with an extensive library of over 1,600 function calls that can be used to integrate virtually any software system. Its Web service-based integration allows systems to exchange data independently of platform, language, and protocol. The result is a wide range of options for running searches and queries as well as offering write access to FNT Command.

All function calls available for application programming with FNT Command are documented in a central library that contains all methods, parameters, and return values. Release-independent web service interfaces deliver high-quality data and optimum stability when connecting with external applications. All changes to the FNT Command data model are automatically made available to the APIs and are immediately valid for all subsequent function calls. Some examples of API access to the FNT Command Platform include linking to workflow engines, use of orchestration tools, and connection to dashboard systems.

UNIVERSAL COMPATIBILITY

FNT IntegrationCenter is the link between the FNT Command Platform and external management systems and data sources. Any external system, data source, or data sink can be used with FNT IntegrationCenter.

As the connector between data and systems, FNT IntegrationCenter can accommodate both unidirectional and bidirectional data transfers, and it can interface with different technologies.

Multiple interfaces with different technologies can exist between an external system and the FNT Command Platform. Examples of external systems that FNT IntegrationCenter is compatible with include:

- Billing Systems
- Ordering Systems
- Workforce Management Systems
- Ticketing Systems
- Workflow Systems
- Network Management Systems
- Orchestrators
- Data bases or home-grown systems

TRAINING, INTERFACE DOCUMENTATION, SUPPORT

Multiple options are available to ensure successful deployment of FNT IntegrationCenter. Taking advantage of these options helps users realize maximum value from their investment.

KEY BENEFITS OF FNT IntegrationCenter

- Designed for high-performance network inventory reconciliation
- Optimized for simple and middle integrations with graphical UI
- Makes it possible to work with Events in your Integration projects
- Enables a common approach for different Integration use cases
- Multiple components are bundled into a single solution so the advantages of each contribute in a unified way to projects as a whole
- Less development time is needed due to extensive out-of-the-box functionality
- Uses a framework that evolves through a continuous feedback loop driven by use in real-world projects