FNT

Fexible data exchange and import

Visual implementation of interfaces

Extensive set of connectors

FNT StagingArea

A Powerful ETL Tool for Exchanging, Comparing, and Importing Large Quantities of Heterogeneous Data

The biggest challenge when it comes to complex systems, such as IT environments, telecommunications networks, and data centers, is not only the huge variety of data involved but also its decentralized storage. Important information is often siloed in multiple, specialist systems. Key data on TC systems, for example, may be located in special, vendor-specific TC software products, while the information required for configuring virtual environments is typically contained in tools developed specially for this purpose.

The integrated data model used by FNT Command Platform provides all the functionality users need to document and manage their IT infrastructures and business services in a holistic, coherent manner. However, unless all data can be extracted from the multitude of system silos, it is almost impossible to create a solid foundation for good long-term decision making. The resulting problems can impact operational processes and often render them inefficient. They can also reduce the value of information required for reliable planning or to predict the effects of changes to the IT infrastructure.

StagingArea is an advanced ETL tool that bridges this gap by enabling FNT Command Platform to import data from a wide variety of external systems. Using the built-in visual editor, it is possible to model new interfaces without specialist programming skills. These can then be use to import large volumes of heterogeneously structured data from a diverse range of systems. 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 the requisite data quality. Since productive interfaces require minimal maintenance, the system is also easy to manage.

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

VISUAL EDITOR

The visual editor in FNT StagingArea enables easy drag-and-drop modeling and configuration of interfaces, with no need for specialist programming skills. There is also a comprehensive library of ready-to-use components that simplify the creation of sophisticated interfaces.

As a web-based application, FNT StagingArea can be accessed from any location with an Internet connection. It also has a simulation function that allow users to check and verify interfaces during the modeling process. This enables quick and targeted implementation of changes and bug fixes to both operational interfaces and those still under construction.
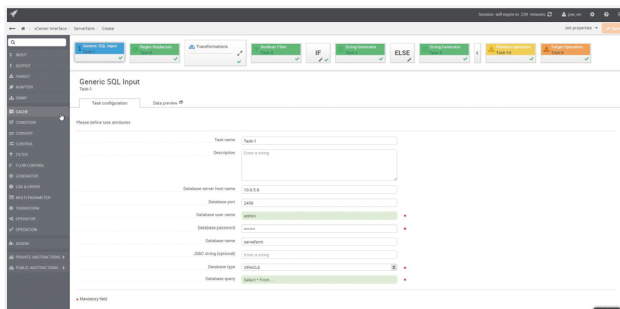

Fig. 1: The visual editor in FNT StagingArea enables easy modeling of interfaces

CONNECTIVITY

Third-party systems are accessed using a range of connectors or adaptors. The software ships with a comprehensive set of predefined native connectors for all the usual output formats, including SQL (MS SQL, Oracle, etc.), XML, XLS, and CSV. The adapters are defined in FNT StagingArea as purpose-built components for specific technical tasks, such as querying all virtual machines via the web service of VMware vCenter™.

COMPONENT LIBRARY AND TASKS

FNT StagingArea has a library of standard components that can be used to modify the processing and quality of data and to make changes to the syntax and schema. The components are grouped in a range of categories, including transformations, generators, and type conversions as well as control modules for case distinction.

WEB SERVICE PROJECTS

The generative web service functionality enables user-defined configuration and deployment of a web service to external web service consumers. It allows event-based forwarding of data from external applications (SOAP) to FNT StagingArea. The received data is validated and processed in accordance with defined procedures. This

facilitates a variety of dynamic integration scenarios, with benefits that include a flexible architecture as well as lower costs thanks to automation.
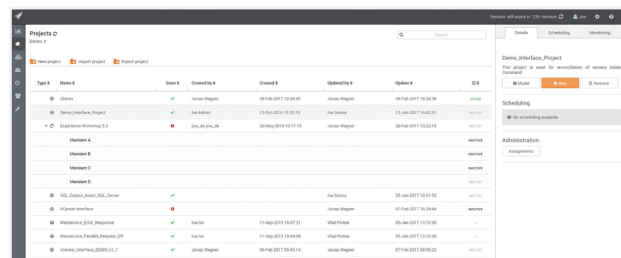

Fig. 2: Overview of productive interface projects

PARALLELIZATION

To speed up individual projects, it is possible to process job tasks and data sets in parallel rather than in sequence. By making optimum use of available resources, interfaces can be operated efficiently at no additional cost and at consistently high speeds.

SCHEDULING

The convenient scheduling function enables users to control the timing of each interface run. An overview of scheduled runs for a specified time period allows easy detection and rectification of any unintentional overlap.

LOGGING

The log level can be defined on a project-specific basis for each interface. It is also possible to freely configure the log level within projects for every job group and every job. If required, the log components can be used in any desired manner when performing process management for an interface project. The functional log for each interface run gives the user a detailed insight and includes extensive filter options, making it easy to find specific information. Filter categories include CI classes and actions as well as specific error classes.

STANDARD CONNECTIVITY WITH FNT COMMAND

The FNT Business Gateway integration technology provides extensive integration with the FNT Command data model. FNT StagingArea visualizes the CI information obtained from FNT Command and allows users to work with operations and queries from this interface. The result is standardized and release-independent integration with FNT Command that is extremely easy to use and maintain. Since FNT StagingArea visualizes the integrity conditions of the FNT Command data model during the interface development process, the user can take these conditions into account and thus avoid modeling errors.

The set of predefined entities used by the FNT Business Gateway integration technology is being continuously extended as part of standard product development. The range of entities available thus depends on the release version of FNT Command in use. New entities can be provided retrospectively. Detailed documentation is available on request.

MANAGEMENT AND MONITORING FUNCTIONS

The integrated management and monitoring functions allow a detailed overview of all project execution activity in FNT StagingArea. The information displayed includes the start time, end time, and duration of the interface run as well as the "health status" of the interface. It is also possible to send automated, event-triggered e-mails to users containing details of the interface run.

ROLE-BASED ACCESS CONTROL

Access to projects and interfaces in FNT StagingArea is administered using a sophisticated system of roles and permissions. Permissions can be set globally or assigned specifically at the project level. Users can be managed individually or in groups, which makes it easy to manage large numbers of users. It is also possible to link to an LDAP server for the purpose of user authentication. There are four basic system roles in FNT StagingArea, each of which is assigned a unique set of user rights. These roles are: Administrator, Modeler, Operator, and Operator Viewer. It is also possible to duplicate and modify or redefine existing roles to meet specific user requirements.

DASHBOARD

The integrated and predefined dashboard provides a quick overview of all key information relating to operational control of interface projects. As well as providing summaries of all interface runs over a specified period of time, the dashboard has predefined filters that can be used to limit the display to specific interface projects, time periods, or error categories. Links to the corresponding monitoring records make it easy to analyze specific errors in more detail. The dashboard also includes an overview of upcoming interface runs.
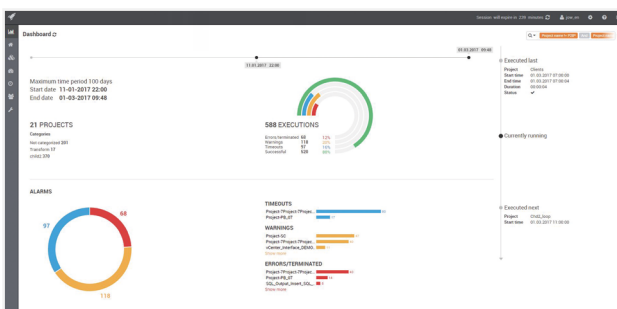

Fig. 3: Integrated dashboard showing details of interface projects

EXPORT TO FILES AND DATABASES

FNT StagingArea also includes components that allow data to be exported in XML format, as a CSV file, or to a SQL database. This means that data can be extracted from multiple target systems and converted to XML for subsequent processing or written to any SQL database.

CACHES & PERSISTENT DATA TABLES

Caches enable the user to store data from third-party systems in order to perform synchronization when executing the interface. The loaded data is held in RAM and deleted after a project is completed. Data tables, by contrast, use persistent data. This means the data is stored permanently in the database and is available for a variety of use cases across various projects. The structure of the data table can be easily configured via the graphical user interface. Similarly, users can view the content of the data table at any time and modify it manually as required.

Use cases for data tables:

- Collecting or distributing data for upcoming interface runs
- Mapping tables to translate between attributes from source and target systems
- Compiling customer-specific logs/log tables

CONTROL OF EXECUTION CONFIGURATIONS

Existing modeled projects can be controlled, terminated and executed independently by means of execution configurations for different environments. When using several clients of FNT Command, complex interfaces can be administrated more quickly and with less maintenance. Additionally, execution configurations are ideal for productivity and test environments, as they can be implemented to perform a quick switch between different contexts and environments using the activation and deactivation mechanism.

The control of execution defines which parameters or targets should be transferred to the respective instance of a project in order to overwrite or exchange data. The application offers various usage possibilities:

- Dynamic exchange of the target system
- Dynamic exchange of the source system
- Dynamic overwriting of input and output parameter

The various execution configurations can be defined and edited in the respective project. A parallel or sequential execution allows additional control of the system utilization.

ADD-ON API

With a standardized interface for the integration of add-ons and additional components, the functional range of FNT StagingArea can be extended flexibly. In an user-friendly administration interface, all installed add-ons including version information can be viewed and controlled. The inputted add-ons are downwards compatible and stable. Furthermore, they can be installed as Hot Deploy, to avoid rebooting the system.
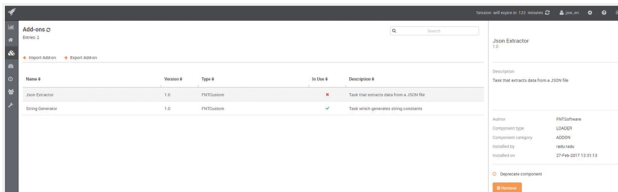

Fig. 4: Flexibly extendable functional range through a standardized add-on interface

Customized add-ons can be developed on request to create specific input or streaming components for data transformation or output.

KEY FACTS

FNT StagingArea is a powerful ETL tool with a built-in graphical editor that enables users to model powerful interfaces quickly and easily and to automate the import of data. In addition to consistently high quality and controllable costs, the software provides the basis for:

- Fast interface modeling using a graphical editor with no need for programming skills.

- Easy data integration with FNT Command Platform thanks to an extensive set of components and connectors.

- Powerful and scalable interface projects with low maintenance costs.

- Optimum reliability thanks to built-in simulation and integrity checks.

- Fast installation and release-independent application of interfaces to FNT Command thanks to the modular structure of FNT StagingArea.

- Convenient performance monitoring through built-in reporting and monitoring functions in a user-friendly dashboard.

- Flexible extensibility of the functional range through a standardized API interface for add-ons.