



Micro Focus®

# Enterprise View™

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What's New in Release 5.6.2.



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# 1. What's New in Enterprise View 5.6.2

## 1.1. Core Enterprise View Capabilities

This release of Enterprise View is based on a set of requirements received directly from customers, and focuses on core functionality, stability and ease-of-use. Improvements have been made in a number of areas including a wide range of customer-requested product enhancements.

## 1.2. Language Improvements

The following updates have been made to the language support technology:

- Support has been added for MF COBOL embedded SQL using Oracle
- This release of JCL includes improved relationships for IKJEFT1B where input and output files are tracked.

## 1.3. Product Documentation Improvements

- The following documentation has been updated or improved:
  - Enterprise View Portal online help
  - API Guide
  - Hardware and Software Requirements
  - Impact Analysis online help
  - Impact Analysis User's Guide
  - Installation Guide
  - Function Point online help
  - Function Point - User Guide
  - Dynamic Links Process Guide
  - Configuration Manager online help
  - Report Wizard Guide - Step by Step
  - Supported Environments Summary
  - COBOL Process Guide

## 1.4. Environment and Platform Support

Enterprise View is now certified against:

- Windows Vista
- Oracle 11g
- Red Hat Enterprise Linux 5

*Note: For more information read the Hardware and Software Requirements and Supported Environments documents.*

## 1.5. Product Installation Improvements

The installation effort is now as streamlined as possible, even for inexperienced users. Specific improvements include:

- Integrated Host, Portal, Agent and Data Integration Installation – three instead of four step installation.
- Improved pre-checker

*Note: For more information read the Installation Guide.*

## **1.6. Function Point Analysis**

A new configuration parameter has been added to the Function Point Analysis module:

- “Use user defined logical files for calculation” used with logical file joining. Disabling this option will allow for automatic grouping of physical files into logical ones, based on the internal file names used in the programs within each functional unit.

*Note: For details, see the “Function Point” Guide and the Function Point online help.*

## **1.7. Control Flow Analysis**

This new feature has been added to Enterprise View Impact Analysis and Tech modules. It lets you view and investigate the execution flow of programs (for example the sequence of execution of paragraphs).

Control Flow is available for all the COBOL dialects listed in Supported Environments. For more information read the Impact Analysis Process Guide

## **1.8. Performance**

Key functional enhancements have been made in the following areas:

- Optimization of startup procedures in Enterprise View Impact Analysis module
- Optimization of the Quality Analysis Job procedure
- The execution time of the Snapshot refresh job has been reduced

## 2. What's New in Enterprise View 5.6

Micro Focus® Enterprise View 5.6 provides a wide range of new and enhanced features focused on improved user experience and improved breadth and depth of coverage. The following is a brief summary of some of the recently added capabilities and benefits.

### 2.1. Core Enterprise View Capabilities

This release of Enterprise View is based on a set of requirements received directly from customers, and focuses on core functionality, stability and ease-of-use. Improvements have been made in a number of areas including a wide range of customer-requested product enhancements.

### 2.2. Language Improvements

The following updates have been made to the language support technology:

- PL/I language support:
  - Support has been added for case-insensitive dynamic links
  - Management is now provided for multiple, comma-separated includes in the same %INCLUDE statement
  - The error reporting from the PL/I preprocessor has been updated
  - McCabe calculations for embedded CICS HANDLE statements are now provided
- The COBOL language support has been improved in the following areas:
  - Support has been added for case-insensitive dynamic links
  - McCabe calculations for embedded CICS HANDLE statements are now provided
- DB2 Alias support:
  - DDL support has been improved to report aliases, relationships from alias toward the underlying object, and relationships from programs toward aliases.
- JCL support:

This release includes improved relationships for the following utilities where input and output files are tracked:

- IDCAMS (cmd: REPRO)
- DSNUPROC (cmd: LOAD, UNLOAD)
- ICEGENER
- ICEMAN
- IEBGENER
- SORT
- SYNC SORT
- DFSORT

### 2.3. Product Documentation Improvements

- The following new documentation is provided:
  - Portal documentation
  - Job Submission Guide
  - Migration Guide
- The following documentation has been updated or improved:
  - Authorizations and Models Process Guide
  - Multi Daemon User Guide

- Connections and Options Process Guide
- Installation Guide
- Measures and Metrics
- ExQL User's Guide
- ExQL online help
- Navigator online help
- Configuration Manager online help
- New chapters about National Language Support (NLS) in various documents
- Outsource Manager online help

## 2.4. Product APIs - New

Two new APIs, which are related, have been added:

- API for Custom Object Measures. This API enables object level metrics extracted from external tools, and other information related to a single object, to be imported to the Enterprise View repository.

Imported data stored in the Enterprise View repository can also be exported to the Enterprise View Portal. Examples of such use are:

- Object performance and/or resource consumption, for example JCLs or transactions
  - Object faults, for example program ending abnormally
  - Software metrics calculated by external metrics calculators
- API to define custom groups and select the metrics to insert in each group, including the new Custom Object Measures. Previously the metrics groups were built into the product and could not be modified by users.

## 2.5. Product APIs - Updated

- The Reference API is used to automatically create custom references between organization views or objects. The capability to specify line number to relationships has been added. Using this feature a relationship can be specified that not only links to the objects, but identifies the exact point in the source code.
- Authorization API:
  - Enterprise View provides a Client (Win32) module to manage users and authorization. It can be applied to Organization Views or to a Client Module, for example Software Quality or Dynamic Inventory.
  - Since authorizations related to Organization Views are the most frequently defined and changed externally, the capability to import Client Modules authorizations has been added.

## 2.6. Environment and Platform Support

Specific updates and improvements in the following areas are included:

- Enterprise View is now certified against Citrix and has been tested under Citrix Metaframe Presentation Server 4.0.
- The product has been tested against a variety of UNIX and Oracle platforms. For more information, see the "Supported Environments" guide.

- The product now provides National Language Support (NLS) to correctly display national language character sets. Code Page support enables the use of extended character sets, for example those used in Nordic, Slavic and Latin alphabets.

*Note: In this release, NLS support is available for COBOL and Java.*

## 2.7. Performance

Key functional enhancements have been made in the following areas:

- The Oracle connection layer has been replaced with a direct connection mode (ODAC support). The new layer provides a database access performance improvement of 10-15%.
- Software Quality and Dynamic Inventory capability performance is significantly improved due to restructured SQL queries.

## 2.8. Security Enhancements

Key new security capabilities have been added:

- LDAP Support - login authentication can now be provided using MS Active Directory services allowing single sign-on.
- Access to the "Work with Object Owner" Builder function can now be restricted to authorized users.
- The ability to edit, delete or create Software Quality charts and Application Value Manager analyses can now be restricted to authorized users.
- Authorized users are defined in the "Configurator-Access Manager-Applications/Modules" feature.
- The "All Organization View levels" feature to filter the user's view of the charts and summary tables is now available according to the user's access rights.

## 2.9. Product Installation Improvements

The installation effort is now as streamlined as possible, even for inexperienced users. Specific improvements include:

- A prerequisite checker script to check the target UNIX Server installation. Running the script highlights any missing requirements.
- The ability to edit all the configuration parameters from the client using the Configuration manager. Configuration settings have been moved to the repository database, instead of manually edited configuration text files.
- All the parameters required for the Portal configuration being provided during installation. In previous versions, some aspects of the configuration required text-based files to be edited manually.
- The new Oracle connection layer (based on ODAC) to greatly simplify the creation of client connections:
  - An Oracle Client is no longer required on a user's PC
  - The Oracle connection need be specified only during product operation
  - The kb-Server module (based on Borland Midas) is no longer required
- The DBInstall and DBUpdate modes to support the following features:
  - Work in off-line mode - generate SQL scripts without connecting to the Oracle database.

- Capability to customize the initial segment size for primary keys and indexes (for performance improvements)
- Customize DB Schema name in generated scripts: previously the schema name was fixed
- Startup and shutdown of the Portal is now available from the Enterprise View main menu (if installed with the engine).

## 2.10. UNIX Agent

All XML files are passed through the UNIX Agent, allowing custom processes to receive them. In previous releases, the UNIX Agent recognized API files with predefined names only, discarding all other XML files.

## 2.11. Change Traffic

Change Traffic is a new feature that enables users to separate Change Traffic related to program changes from generic object traffic. “Generic objects” are maps, images, copybooks, scripts and any object for which metrics are not calculated.

## 2.12. Outsource Management

- It is now possible to link applications to service providers or teams. This facilitates a more powerful and straightforward analysis of service providers, whether outsource, offshore, or separate internal teams.
- Change Traffic can now be divided by task, allowing a fine-grained analysis of service provider activity.

*Note that these capabilities are available only with the Outsource Manager option.*

## 2.13. Metrics

- Metrics can now be organized by custom-defined groups rather than only built-in groups, such as Size, Complexity and Maintainability. Custom metrics groups can include imported metrics as well as predefined metrics.
- The groups are available in the Portal for easy analysis.
- Enterprise View provides Metrics Groups to help users find an answer to specific questions such as:
  - Are resources properly allocated throughout the lifecycle of the application?  
Metrics example: Maintainability Index, NC-LOC, Change Traffic ...
  - How much effort should be expected for a complete software test?  
Metrics example: McCabe and Extended McCabe, Volume, Function Points ...
  - Are there applications for which a re-engineering project can greatly reduce maintenance effort and bug-fixing?  
Metrics example: Maintainability Index, Extended McCabe, Change Traffic ...
  - Do Java applications follow O-O design principles?  
Metrics example: DIT (Depth of Inheritance Tree), CbO (Coupling Between Object).

## 2.14. CSD Analysis

New analysis capabilities for CSD code include:

- CSD (CICS System Definition) Report generated by DFHCSDUP.
- Each CSD Report is treated as a separate object.

- LIST, GROUP, CONNECTION and TRANSACTION objects and the relationships between these objects and Program/Map/File objects are documented.
- LIST and GROUP objects can now be excluded from documentation depending on custom-defined lists.
- REGION information is obtained from CICS startup JCLs (supported when parameters to DFHSIP are described in SYSIN card).
- DDName/DSName mapping as described in FILE statements is documented in order to resolve DDName toward DSName in IO operations.
- CSD Analysis enables a detailed examination of a CICS environment, and a precise identification of the links between internal file names used by CICS transactions and the real physical files.

## 2.15. Function Point Analysis

A new feature has been added to support Function Point Analysis.

A Function Point (FP) is a unit of measurement used to help assess the size or complexity of a software project, and often requires a subjective manual process. To simplify the process, we have incorporated a functional measure called Technical Function Points (TFP), calculated using the same principles as traditional Function Points, but calculated automatically.

For details, see the “Technical Function Point” Guide.

For users who already have FPs calculated for some applications, Enterprise View enables them to manually input the figures, so a comparison can be made between their own traditional FP methods and the Enterprise View TFP implementation.

## 2.16. Impact Analysis Option Capability

The Impact Analysis option has been enhanced as follows:

- Grid enhancements provide multi-selection capability.
- In grids, wherever attributes such as type and length are available, they are now included in the display.
- The option to automate User Search Criteria reduces the need for user intervention.
- The option to automate Step creation means users need not provide Step Name and Description.
- Each user can customize the level of interactive messages provided.

## 2.17. Data Flow Analysis

Data Flow Analysis is a new feature in this release:

- Analyzing a project containing many thousands of objects can be very complex. To overcome these issues we have added a Batch Propagation Network feature to automatically track the data flow across programs and applications, with no user intervention required.
- In some cases, automatic propagation can result in many “false positives”, where objects can appear to be impacted but are not. These cases can be greatly reduced by adjusting the following parameters, which are available at both the Step Level and User Level:
  - Number of automatic iterations to be executed

- List the statements that should be included or excluded from the process
  - Set a stop condition on objects or attributes
- This new features allows better management of typical mass maintenance projects such as:
- Repetitive mass maintenance changes, such as field enlargement
  - Impact on moving an application from IMS/DLI to CICS/DB2
  - Assessment on moving from IBM COBOL to MF COBOL
  - Assessment on moving from one RDBS to another
  - Upgrading of platform/language release

## 2.18. Reporting - The Enterprise View Portal

The Enterprise View Portal is a web-based application that enables users to access your Enterprise View information and results from anywhere in the world.

The Enterprise View Portal Knowledge Base is a repository containing information and reports about your software applications that have already been analyzed by Enterprise View.

The Portal provides a powerful set of tools for extracting the precise information users want. There is no requirement to perform any further analysis; users just search for the information they need. Information is presented as reports, graphics and synthesis dashboards, which can all be customized to display the information the way individual users want it.

This release includes a number of significant improvements to the Portal and reporting features:

- Improved online documentation within the portal, including:
  - Online help accessible directly from the Portal
  - A step-by-step guide describing the report creation procedure
- Templates allowing easy customization of reporting by applying ordering and grouping criteria, and filters, to display only the information required. For example, users can select the metrics to show the group calculation (sum, average, min, max, and count), or the applications or components to include or exclude for example.
- The inclusion of many standard templates in the Portal to produce useful reports and dashboards more quickly:
  - Current Status templates allow users to define reports and dashboards showing the applications as they are now, independent of their history
  - Trend Analysis shows which modifications occur over time, in terms of Change Traffic, Size and Complexity for example.
- A large number of HTML report templates to display the current status and trend analysis of:
  - Dynamic Inventory
  - Software Quality
  - Outsource Dynamic Inventory
  - Outsource Software Quality
- HTML report templates for:
  - Change Traffic Information for all cataloged objects (all objects in the Application Inventory)
  - Change Traffic Information for measured objects only (programs written in supported languages)
  - Outsource Change Traffic Information for all cataloged objects

- Outsource Change Traffic Information for measured objects only
- Graphic dashboards for the following key elements of information (with specific attributes listed as sub-bullets):
  - Dynamic Inventory
    - Overview
    - Business Views
    - Summary
    - Programs
    - Files
    - Trend
  - Software Quality
    - Overview
    - Size
    - Volume
    - Maintainability
    - Complexity
    - Others (allows the crossing of two metrics in the same period or the same metric in two different periods)
    - Trend
    - Defect
  - Outsource Management
    - Inventory Summary
    - Software Quality (Complexity and Maintainability)
    - SLA Analysis
    - Outsourcers Dashboard (it dynamically shows how Inventory, Quality and Change Traffic change over time)
- In the Portal home page, the Change Traffic and Changed Objects periods are no longer fixed and can be chosen by the user as 3, 6 or 12 months.



## 3. What was Added Between Enterprise View 5.5 and kb-AIM 5.2

### 3.1. Parser Improvements

Relationships among objects are an important part of the product and their understanding is fundamental for the use of the Impact Analysis module and Technical Documentation features, and of the product interfaces etc.

The following have been introduced to optimize the reliability of the relationships, tracking them in a more precise and detailed way:

- The PL/I parser supports the following constructs and analysis capabilities:
  - Memory Map Object Analysis
  - Detailed Analysis
  - Metrics
  - Dynamic Calls
  - ENTRY
  - I/O Type
  - Assignment Statement Handling (without pointers)
  - Pointers Management
- The COBOL Parser has been improved in the area of assignment statement handling (e.g. better proposed call reliability).
- The retrieval of incoming COBOL programs related to a changed COBOL Copy can be disabled. This can improve the analysis process performance.
- Publishing inside Oracle of the COBOL Memory map and of the results of the Statement Level Analysis (Verbs, Operands and Operators). This feature allows users to create their own customized enquiries. Within the product, there's an open repository where each user can create and store his analysis separately from the one provided by default.
- Other general parsing improvements have been added, including
  - TS/TD queue recognition
  - GDG recognition
  - Temporary files recognition

### 3.2. Product APIs

The ability to collect, organize and normalize data coming from an external source is fundamental to creating a complete, exhaustive, extensive and reliable knowledge base.

With this in mind, the Micro Focus Enterprise View 5.5 new APIs widely extend the APIs available in order to integrate the product database with external information.

Information shareable through the API includes:

- Virtual Object Managing (e.g. Service name) has been introduced. This feature allows the creation of Objects that are not strictly related to a "physical" source. For example, a Service is something "logical" and is made by physical objects. If we want to create it, we have to link different programs that physically DO something to the virtual Object. Then, this virtual Object could be inserted within the Knowledge Base, could be associated with different relations (both for tracking service users and service providers) and could be linked to the Role-based views.

- A new API is included that enables the automatic creation of Custom and Technical Views. So, you can generate views on the cataloged data that suit different types of users (role-based views), such as managers, outsourcers, technical team, etc. For example, if we want to show data that monitors the outsourcers' trends, a view will be created that is dedicated to "outsourcers" in order to control trends, quality metrics, SLA etc.
- External relationships: This API can be used to automatically create Custom References between cataloged Objects. All types of objects can be specified as part of a relation, including the ones declared as Virtual Objects.
- Object properties: the Interface will be used to update standard properties for Organization Views and/or Objects, and to add any new Custom properties. Using the same interface, the customer can handle each property introduced linking to the Software Life Cycle process.
- An API to import external metrics which are not gathered from the sources parser – such as performance, bug fixing etc.
- An API has been provided to import User Authorization and privileges from Directory Services packages.
- A multi-daemon engine. A "Daemon" is an engine that executes jobs. This new feature introduces more "daemons", thereby supporting more efficient workload distribution. Each daemon can now be associated with a user or group of users in order to rationalize all the workloads. The number of daemons can be configured based on the users' needs.

### 3.3. Life Cycle Improvements

Improvements have been implemented to provide key functional enhancements as follows:

- The process is now able to restart after a failure. A previous difficulty with the Analysis and Life Cycle processes was that if they crashed, they had to be executed again and, in most cases, it was necessary to make some manual changes. A list of restart criteria has been now introduced in order to automatically understand if a process ended abnormally and, if so, restart it from the step on which it crashed. This further improves the automation level of the process, by removing any manual intervention and speeding up the restart.
- Software Life Cycle role-based view handling. Views are built up from information from the Change Configuration tool. A good example is the "Project Code" that helps to identify the specific project for which some software components have been modified. This quick identification allows the automatic building of Role-based Views in order to monitor the trend or the final balance of the project itself.
- Performance improvements have been introduced to the daily life cycle and the parser analysis processes. This will allow load-time improvements of as much as 20%.

### 3.4. Source recognition

This implementation provides a new functionality to automatically classify (in terms of assigning a CLASS-LANGUAGE-TYPE tuple) OS/390 artifacts without installing the zSeries Custom agent. This feature will give significant time savings during Rapid Assessment projects.

### 3.5. Software Quality

The product includes capabilities to audit the quality and maintainability of applications. These capabilities also feature drill-down actions, which enable inventory subsets to be viewed by application, domain or portfolio to benchmark software quality over time and against service level agreements. The following improvements have recently been made to this area of the product.

- New functionality for HTML publishing
- Dynamic configuration of Home charts – users can customize their own charts
- Object metrics details by application

### 3.6. Impact Analysis

The product includes capabilities to support full detailed impact analysis across an entire set of applications. These features improve the usability of this module, giving users an immediate view of the list of impacted lines of code; enabling them to create customized impact analysis; and, finally, saving them time by exporting only partial and not all of the sources. The following improvements have recently been made to this area of the product.

- Partial source export during HTML Export
- In work with candidates, data flow analysis (propagation network) has been enabled.
- Highlighting of Candidates and impacted lines in Work With Candidate
- Creation of new external functions

Function	Description	Output
<b>Copy Fields (by name)</b>	Starting from a copy, detects all the COBOL programs that use a specific field	<ul style="list-style-type: none"> <li>▪ COBOL program</li> <li>▪ COBOL variable</li> <li>▪ COBOL statement where variable is used/declared</li> </ul>
<b>Get Attribute</b>	Gets Attribute by name	<ul style="list-style-type: none"> <li>▪ Program</li> <li>▪ Attribute</li> <li>▪ Statement where attribute is declared</li> </ul>
<b>Copy Fields (by offset)</b>	Starting from a copy, detects all the COBOL programs using fields belonging to a specific area (by offset / length)	<ul style="list-style-type: none"> <li>▪ COBOL program</li> <li>▪ COBOL variable belonging to the specified area</li> <li>▪ COBOL statement where variable is used</li> </ul>
<b>Used File Field</b>	Starting from a file (VSAM, SEQ, GDG), detects all the COBOL programs using a specific portion of the I-O area (by offset / length)	<ul style="list-style-type: none"> <li>▪ COBOL program</li> <li>▪ COBOL variable belonging to the I-O area</li> <li>▪ COBOL statement where variable is used</li> </ul>
<b>DLI I-O Area</b>	Starting from a DLI segment, detects all I-O areas used within CBLTDLI calls	<ul style="list-style-type: none"> <li>▪ COBOL program</li> <li>▪ COBOL I-O area</li> <li>▪ CBLTDLI statement</li> <li>▪ DLI Segment name</li> </ul>
<b>Literals</b>	Gets hard-coded literals by program – NOTE: Loading Detailed Analysis is required	<ul style="list-style-type: none"> <li>▪ COBOL program</li> <li>▪ Hard coded literal</li> <li>▪ COBOL statement where Hard coded is used</li> </ul>
<b>Statement Nesting Level</b>	Highlights all the statements which exceed the nesting level threshold specified	<ul style="list-style-type: none"> <li>▪ COBOL program</li> <li>▪ COBOL statement</li> <li>▪ Nested Level</li> </ul>
<b>Fields Not Used</b>	Starting from a program/copy, detects all the fields not used	<ul style="list-style-type: none"> <li>▪ COBOL Program</li> <li>▪ COBOL variable</li> <li>▪ COBOL statements where</li> </ul>

		variable is used
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### 3.7. Other improvements

Some improvements in the Analysis Processing and Reporting have been introduced, including:

- Improvement in User Authorization and privilege handling. It is now possible to define some security standards related to the password (minimum length, password expiration date etc). Additionally, “privilege handling” enables users or groups of users to access specific Role-based Views
- A warning message if CICS programs are found but no CSD is provided
- A Timeout facility to manage wrong source cataloguing
- An “Analysis Status” facility (To Do Extended, To Do Basic), available to correctly show the parsing status
- Advanced parameters on analysis submission  
*(Note: Only the Admin user will be able to modify the advanced parameters while submitting analysis jobs.)*
- New Micro Focus branding for software, packaging and documentation
- New Micro Focus installation mechanism

### 3.8. Product Documentation Improvements

The product includes capabilities to create a dynamic blue-print of the application architecture and inventory, detailing all links and interfaces between application objects. It publishes output in HTML format for browser-based access by users without the Enterprise View client modules installed. It allows easy integration with other documentation (planning or project) available on the intranet. The following improvements have recently been made to this area of the product.

- New HTML publishing functionality
- New Interfaces functionality
- New Dynamic Link Confirmation functionality
- Show relation grouped by JCL Steps
- Dynamic Tabsheets Management supports Reporting customization names, position and visibility can now be customized
- A new feature of the Builder function, called “Work with Object Owner”, allows you to reassign owners to any unresolved objects simply using drag and drop.

### 3.9. Reporting - The Enterprise View Portal

The Enterprise View Portal is a web-based application allowing easy inquiries of and reporting on the Enterprise View Knowledge Base – a repository containing information about your software applications.

Information is presented as reports, graphics and synthesis dashboards that can be used as is or customized from the users.

Whenever the Enterprise View Knowledge Base is updated, for example when new or updated software is analyzed, or custom data is imported through the product API, the Portal database is updated too.

In this way, the data you see in the Portal is always aligned with the repository.

There are many advantages in using a Portal solution instead of traditional client modules:

- Users don't need to install Windows applications on their PCs, so provided they have a User ID and Password, they can access the Portal from everywhere.
- The Portal reports and graphs can be customized by a trained user, according to customer needs and preferences.
- The Portal data is stored as Hyper-cubes allowing slice and dice, drill down and pivoting (similar to Pivot Tables in an Excel spreadsheet).

