

MetaMatrix Enterprise Release 5.5.3
Common Criteria Supplement to the Administrative Guidance

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Common Criteria Supplement to the Administrative Guidance

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Prepared For



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1 Introduction

MetaMatrix Enterprise Release 5.5.3 (MetaMatrix) is an enterprise information integration (EII) system. EII is based on the premise that enterprises have a variety of information sources and information types, distributed geographically, and owned by different parts of the enterprise. A basic tenet of EII is that information should be capable of integration regardless of its native physical storage characteristics.

MetaMatrix manages and describes information that is spread across disparate enterprise information systems. Using MetaMatrix these enterprise information systems can be integrated into a single, complete data access solution. It provides a way to define the characteristics of information and how information is related, and manage this “data about data”, or “Metadata”. MetaMatrix users can issue queries to any data source, process and integrate the results derived from multiple sources.

MetaMatrix protects the distributed data and Metadata through an access control policy, user identification and authentication, role-based management functions and auditing of security relevant events.

1.1 Purpose of the CC Supplement

This document is a supplement to the MetaMatrix administrative guidance, which is comprised of the installation and administration documents specified in Section 1.3. This document supplements those manuals by specifying how to install, configure and operate this product in the Common Criteria (CC) evaluated configuration.

In this document, the MetaMatrix Enterprise Release 5.5.3, in the evaluated configuration, is referred as the Target of Evaluation, or TOE.

1.2 CC Evaluated Configuration

The MetaMatrix Enterprise Release 5.5.3 Product is comprised of the following software components:

- Design-Time Components:
 - MetaMatrix Repository
 - MetaMatrix Enterprise Designer
- Run-Time Components:
 - MetaMatrix Server
 - Connectors
 - MetaMatrix QueryBuilder
- Supporting Software Components:
 - MetaMatrix Platform
 - MetaMatrix Web Services
 - MetaMatrix ODBC and JDBC Drivers
- Management Components:

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- MetaMatrix Enterprise Console
- MMAdmin Scripting Environment

The TOE provides the following security functionality: auditing of security relevant events; TOE user account administration; TOE user identification and authentication; security role based access to management functions and User Data Protection (a user's access to both Data from the EISs and Metadata stored in the MMR)

The evaluated configuration of the TOE and the security functions that it provides is specified in:

[ST] *MetaMatrix Enterprise Release 5.5.3 Security Target*

1.3 References

This document is a supplement to the following MetaMatrix product documentation:

MetaMatrix Administration Shell Users Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Connector Developer's Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Custom Scalar Functions Tutorial, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise 5.5.3 – README, MetaMatrix Enterprise Server, Release 5.5.3, Build 3126, October 15, 2008
MetaMatrix Enterprise Administration Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise Client Developer's Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise Console User's Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise Data Caching, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise Designer User's Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise Installation Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise QueryBuilder User's Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise Server Tuning Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Enterprise SSL Guide, MetaMatrix Products, Release 5.5.3, Rev. A, May 2009
MetaMatrix Enterprise XQuery Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Feature Overview and Value Proposition, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Guide to the Design Time Catalog, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix JDBC Connector Integration Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Known Issues, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Membership Domain Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Metadata Repository User Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Oracle Spatial Connector Integration Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Release Notes, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Server Security, User Authentication, and Authorization, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Text File Connector Integration Guide, MetaMatrix Products, Release 5.5.3, October 2008
MetaMatrix Web Services Guide, MetaMatrix Products, Release 5.5.3, October 2008

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MetaMatrix XML-Relational Connectors Reference Guide, MetaMatrix Products, Release 5.5.3, October 2008

SQL Query Web Service User's Guide, MetaMatrix Products, Release 5.5.3, October 2008

1.4 Scope of the Evaluation

1.4.1 Included in Scope

The physical boundary of the TOE is the entire product as commercially available from the developer except for non-runtime and deprecated components.

The TOE consists of the MetaMatrix components described in section 1.4 of the [ST].

1.4.1.1 Physical Boundary of the TOE

The TOE Boundary is depicted in the figure below.

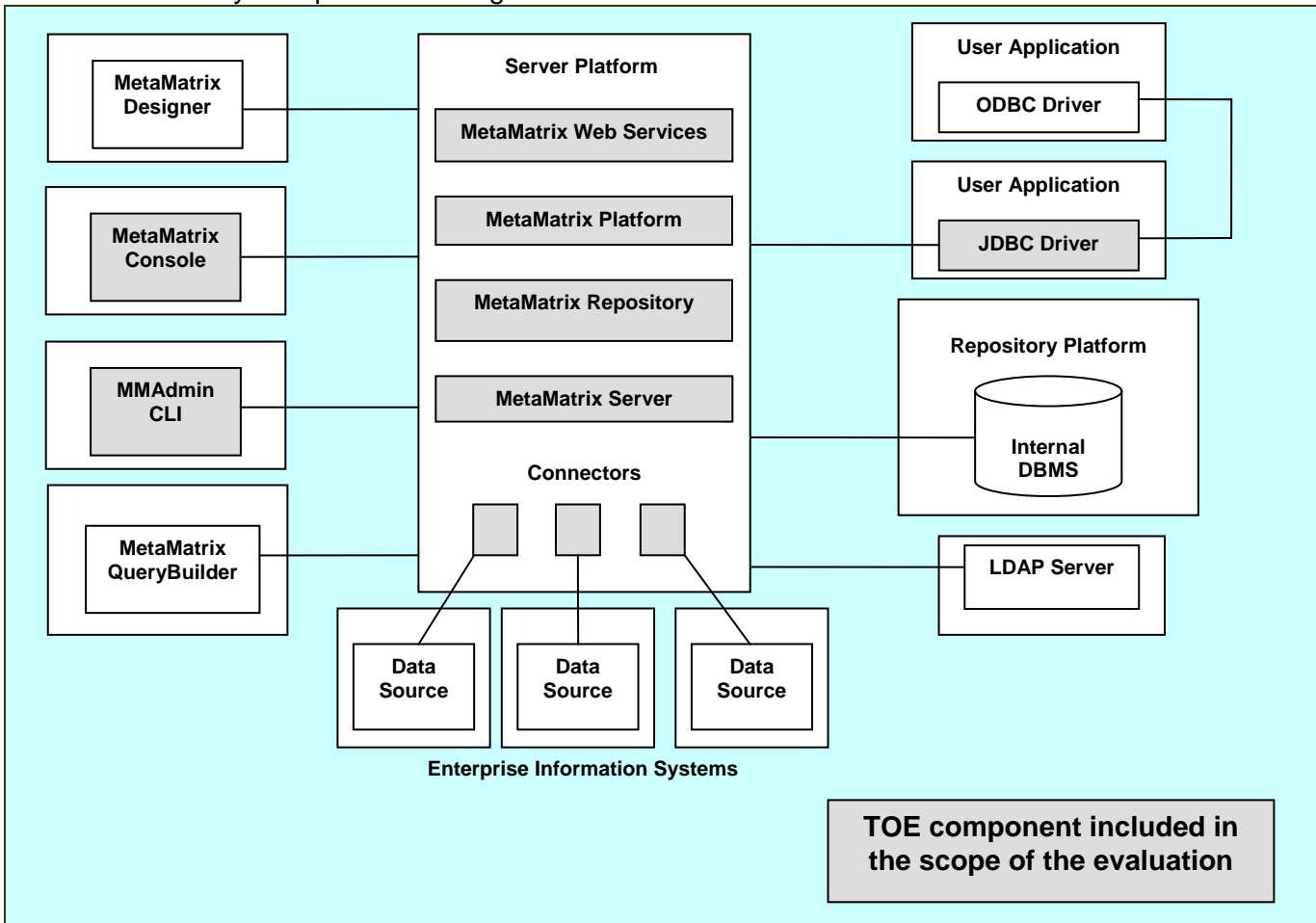


Figure 1: TOE Physical Boundary

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1.4.2 Included in the TOE

The scope of the evaluation will include the following product components and/or functionality:

- MetaMatrix Metadata Repository
- MetaMatrix Server
- Connectors
- MetaMatrix Platform
- MetaMatrix Web Services
- MetaMatrix Enterprise Console
- MAdmin CLI (administration and data access functionality)
- MetaMatrix ODBC and JDBC Drivers installed on client workstations to support user applications.

The following product components and/or functionality are excluded from the scope of the evaluation: (While these components are included in the TOE, they are not part of the TSF and will not be tested.)

- Product components not used during normal operation (runtime) of the TOE:
 - MetaMatrix Enterprise Designer
 - MetaMatrix Query Builder
 - Connector Developer Kit
 - Command Line Interface utilities used during the initial installation and configuration of product
 - MAdmin CLI (programming, migration and testing tools)
- Depreciated product components
 - MetaMatrix Dimension Designer
 - MetaMatrix Reporter

adminshell (precursor to MAdmin CLI)

1.4.3 Excluded from Scope

The following are included in the IT Environment and are not part of the TOE:

- Underlying third party relational database (internal repository)
- Custom Created Connectors
- Third-party user applications
- Custom-coded user applications
- Underlying operating system (OS) software and hardware of the TOE component host platforms
- SSL implementation
- Tomcat/Apache web services

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- Transport standards HTTP, HTTPS, and FTP implementations
- Membership Domain Providers
- LDAP server and interfaces
- Databases and applications used as data sources for testing

The Operational Environment components, specified in Section 2.1, are also excluded from the scope of the evaluation:

2 Operational Environmental

2.1 Hardware/Firmware/Software Required by the TOE

The evaluated configuration of the TOE requires the following Operational Environment support:

- Server running Red Hat Enterprise Linux 5 to host the following product components:
 - MetaMatrix Server
 - MetaMatrix Metadata Repository
 - MetaMatrix Platform
 - MetaMatrix Web Services
 - Connectors
- Workstation running Windows XP to host the following product components:
 - MetaMatrix Enterprise Designer
 - MetaMatrix Enterprise Console
 - MetaMatrix QueryBuilder (running inside Internet Explorer)
- SSL Implementation (MetaMatrix uses the JSSE implementation in the Java Runtime Environment provided by the product installer, which is the Sun JRE version 1.5.0_11)
- Tomcat/Apache Web Services (version 5.0.25 is installed by the MetaMatrix product installer)
- Relational Database to implement MetaMatrix Metadata Repository:
 - Oracle 11g;
- JDBC Database Drivers
 - DataDirect Connect for JDBC version 3.7
- LDAP Server
 - Red Hat Directory Server 8

2.2 Environmental Assumptions

The following assumptions have been made about the TOE's Operational Environment in a Common Criteria compliant Installation:

2.2.1 Competent Management

The TOE assumes there will be one or more competent individuals assigned to manage the TOE and the security of the information it contains.

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2.2.2 Trusted Management

The TOE assumes that there will be no untrusted users and no untrusted software on the TOE server host.

2.2.3 Physical Protection

The TOE assumes the hardware and software critical to the security policy enforcement will be protected from unauthorized physical modification.

2.2.4 Protected Communications

Those responsible for the TOE will ensure the communications between the TOE components and between the TOE components and the remote users are via a secure channel.

2.2.5 Authorized Access

The TOE assumes that its users will protect their authentication data. The TOE assumes that user applications that access the MMR data have been developed, installed and maintained in a secure manner.

2.3 Environmental Requirements

The evaluated configuration of the TOE requires that the Operational Environment provides the following security functionality:

2.3.1 Secure Installation & Operation

Those responsible for the TOE must ensure that the TOE is delivered, installed, managed, and operated in a manner which is consistent with IT security. Those responsible for the TOE must ensure that there are no untrusted users and no untrusted software on the platforms that host the TOE components. Those responsible for the TOE will ensure that user applications that access the MMR data have been developed, installed and maintained in a secure manner.

2.3.2 Physical Protection

Those responsible for the TOE must ensure that those parts of the TOE critical to the security policy are protected from any physical attack.

2.3.3 Authentication Information Protection

Users must ensure that their authentication data is held securely and not disclosed to unauthorized persons.

2.3.4 Trained Administrators

Personnel working as authorized administrators shall be carefully selected and trained for proper operation of the system.

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2.3.5 Password Requirements

Those responsible for the TOE will ensure the TOE users will select a password according to requirements in the user guidance.

2.3.6 Protected Communications

Those responsible for the TOE will ensure the communications between the TOE components and between the TOE components and remote users are via a secure channel. The IT Environment will provide a secure line of communications between distributed portions of the TOE and between the TOE and remote users.

2.3.7 Reliable Time

The underlying operating system will provide reliable time stamps.

2.3.8 External User Authentication

The IT Environment will provide an authentication service for user identification and authentication that can be invoked by the TSF to control a user's logical access to the TOE.

3 Secure Installation & Configuration

The following steps must be taken in order to install the server in the evaluated configuration:

3.1 Preparation

Before the installation, create a unique user account for the installation of MetaMatrix, as suggested in the installation guide:

- On Red Hat Enterprise Linux, use the following command to create the user and group named "mmx"

```
useradd -d /opt/mmx -m -s /bin/sh mmx
```

- set the password in the "mmx" account using the following command

```
passwd mmx (press Enter to be prompted)
```

- The password should be set in accordance with the Admin Password Recommendations in section 3.3 of this document
- Log in to the "mmx" account to begin the installation.

Obtain the MetaMatrix server kit, CCC patch, and the MetaMatrix CC Supplement (this document) from the FTP site or as an installation data DVD. The FTP site location for the certified server product is

```
ftp://partners.redhat.com/metamatrix/JBEDSP_mmx553_3126/server  
/linux/mmenterprise_server_linux.bin
```

During the installation process, choose the following options:

- The recommended installation directory is

```
/opt/mmx/enterpriseserver/5.5.SP3/
```

3.2 Install MetaMatrix Server 5.5.3

Follow the instructions found in the document MetaMatrix Enterprise Installation Guide, Release 5.5.3.

During the installation process, choose the following options:

- The recommended installation directory is

```
/opt/mmx/enterpriseserver/5.5.SP3/
```

- When running setupmm:
 - Use menu item 1 to enter connection properties to the operational repository.

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- Use menu item 2 to create a MetaMatrix Administrator account name and password.
- Use menu item 4 to create a custom keystore by modifying the keystore password string.
- Use menu item 11 to save the configuration properties file.
- Use menu item 12 to run the server setup application.

3.3 Install the CC Patch

Install the Common Criteria patch set, r553_090507_0021.jar, into the server as follows:

- Copy the patch set jar file into the directory

```
/opt/mmx/enterpriseserver/5.5.SP3/lib/patches
```

- Navigate to the directory

```
/opt/mmx/enterpriseserver/5.5.SP3/util/
```

- Export the server configuration file by executing the command

```
./configexport.sh cc_config.xml
```

- Edit the file cc_config.xml and - locate the section containing the text:

```
<ComponentType name="Configuration"
```

- Paste the following two lines into the exported configuration file. They should be inserted into the end of the XML element beginning "<ComponentType name="Configuration"

```
<PropertyDefinition Name="metamatrix.security.disableXQuery"  
DisplayName="Disallow XQuery" ShortDescription="Disallow user XQuery  
queries. If data roles are being enforced this should be enabled."  
DefaultValue="false" Multiplicity="1" PropertyType="Boolean"  
ValueDelimiter="," IsConstrainedToAllowedValues="true" IsExpert="true"  
IsHidden="false" IsMasked="false" IsModifiable="true"  
IsPreferred="false" RequiresRestart="true" />
```

```
<PropertyDefinition Name="metamatrix.security.admin.allowedHosts"  
DisplayName="Admin Account Allowed Logon Hosts" ShortDescription="A  
regular expression that defines the remote host address(es), from which  
the Admin account may logon, in full IPv4 IPv6 form." DefaultValue=""  
Multiplicity="1" PropertyType="String" ValueDelimiter=","  
IsConstrainedToAllowedValues="true" IsExpert="true" IsHidden="true"  
IsMasked="false" IsModifiable="true" IsPreferred="false"  
RequiresRestart="true" />
```

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- Save the changes to the `cc_config.xml` file.
- Import the server configuration file by executing the command

```
./configimport.sh cc_config.xml
```

3.4 Start the MetaMatrix Server

Start the server by

- Navigating to the directory `/opt/mmx/enterpriseserver/5.5.SP3/bin/`
- Running the start script `./startserver`

Start the Web server by

- Navigating to the directory
`/opt/mmx/enterpriseserver/5.5.SP3/hosts/[hostname]/bin/`
- Running the script `./startwebserver.sh`

3.5 Configure MetaMatrix Web Services Security

MetaMatrix Web Services will need to be configured to use the custom keystore created in section 3.2 above. This configuration is explained in the MetaMatrix Enterprise Web Services Guide, in the section titled, “Security”.

The steps to perform are as follows:

- Navigate to the util directory of the MetaMatrix Server
`/opt/mmx/enterpriseserver/5.5.SP3/util/`
- Run the `resolvepw.sh` script, entering the password of the MetaMatrixWSDLUser account.

```
resolvepw.sh [password]
```

- Open the file created by the utility, `pw.properties`, and copy the string after “resolved_password=”, including the characters `{mmencrypt}`
- Edit the `web.xml` file:

```
/opt/mmx/enterpriseserver/5.5.SP3/hosts/[hostname]/servletengine/webapps/metamatrix-soap/WEB-INF/web.xml
```

- Replace the content of the `<param-value>` beneath

```
<param-name>wsdlPassword</param-name>
```

with the value generated by `resolvepw.sh`, including `{mmencrypt}`

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- Open the Java archive (.jar) file:

```
/opt/mmx/enterpriseserver/5.5.SP3/hosts/[hostname]/servletengine/webapps/metamatrix-soap/WEB-INF/lib/metamatrix-keystore.jar
```

- Within the Java archive file, delete the file named “metamatrixpki.keystore” and save the archive.
- Restart the MetaMatrix Web Server
 - Navigating to the directory
/opt/mmx/enterpriseserver/5.5.SP3/hosts/[hostname]/bin/
 - Running the script `./stopwebserver.sh`
 - Running the script `./startwebserver.sh`

Warning: The stopwebserver and startwebserver scripts ignore arguments appended to the command line and continue execution as if no argument has been provided. Command line arguments are not used or checked by the scripts, and the user is not warned about incorrect or unnecessary arguments.

3.6 Install the Console and the MAdmin CLI

Follow Appendix C of the MetaMatrix Installation Guide, Version 5.5.3 to install the MetaMatrix Console and the MAdmin command line interface.

Start the Console. Connect to the MetaMatrix Server using the MetaMatrixAdmin account established during the server installation.

Console Connection IP Address List - Access to the Console should be restricted to computers at specific IP address. This is achieved in the MetaMatrix Console as follows:

- Select the "System Properties" node in the left-hand panel to display the "System Properties" tree.
- Select the “security” node in the “System Properties” tree.
- In the field labeled “Admin Account Allowed Logon Hosts”, enter a regular expression representing the list of IP addresses for which the server will permit Console and MAdmin connections. For example, to restrict admin logons to 192.168.1.15, the value of the property should be

```
192\.168\.1\.15
```

- Check the “Disallow XQuery” property.
- Select the “Apply” button to update the property on the MetaMatrix Server.

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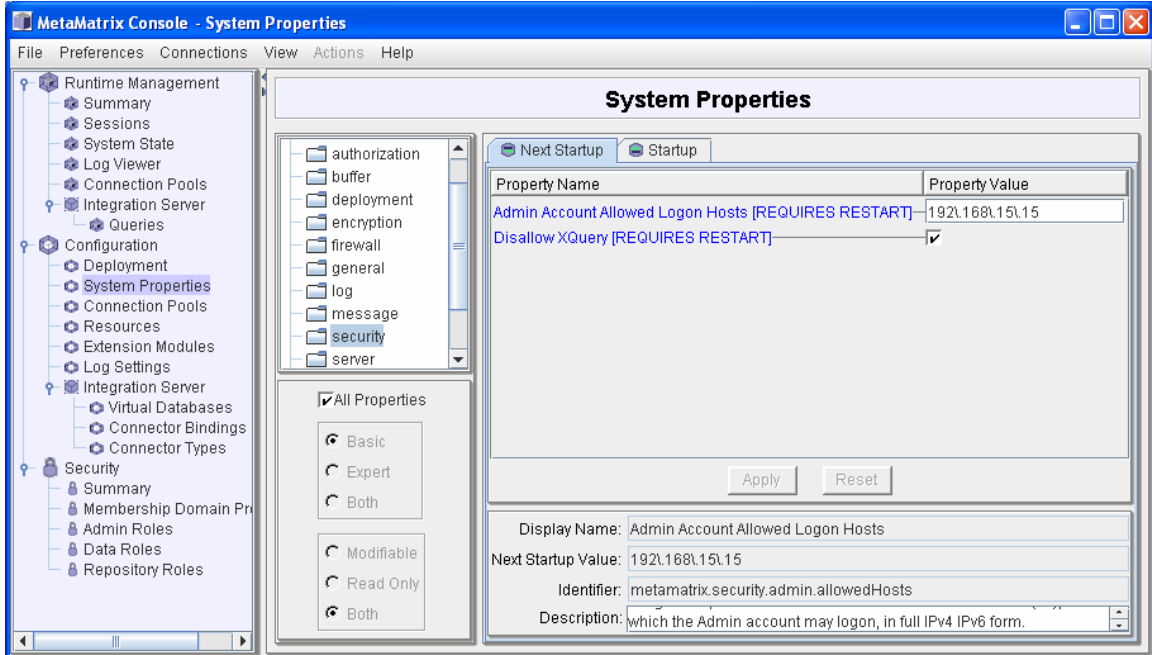


Figure 2 – MetaMatrix Console, Security System Properties

Data Access and Metadata Repository Authorization - Configure the server to require authorizations for Data Access and the Metadata Repository:

- Select the “authorization” node
- Check the property “Data Access Authorization Enabled”
- Check the property “MetaBase Authorization Enabled”
- Select the “Apply” button to update the authorization properties on the MetaMatrix Server.

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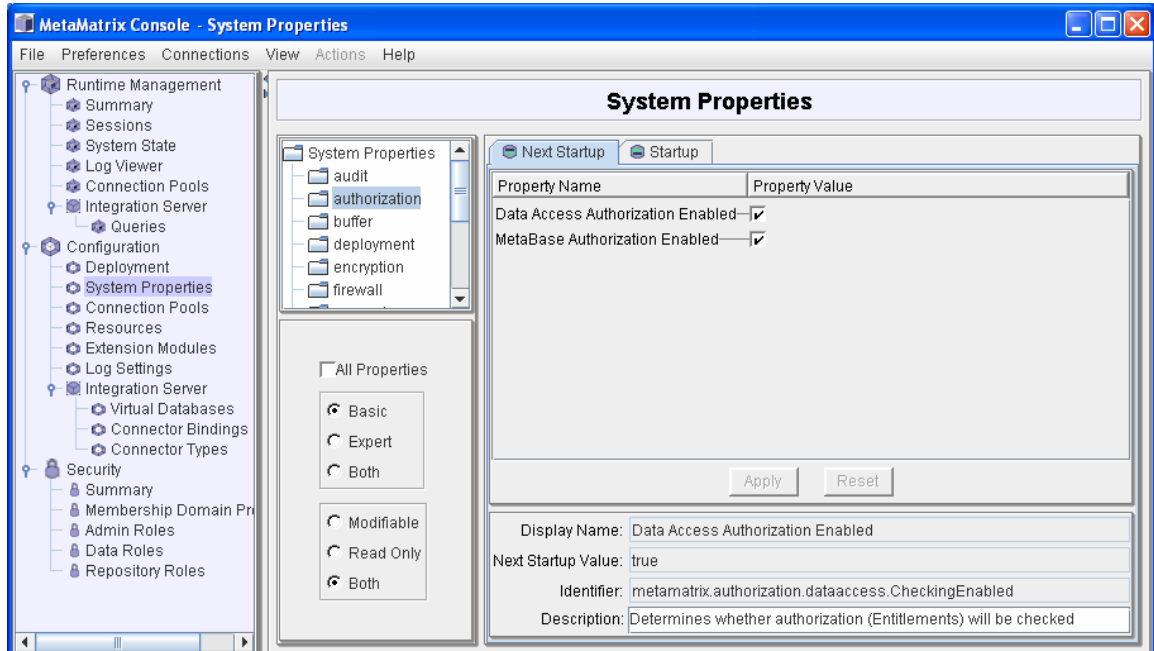


Figure 3 – MetaMatrix Console, Authorization System Properties

Configure Logging - To configure the MetaMatrix Server for audit logging, use the MetaMatrix Console as follows:

- Select the "System Properties" node in the left-hand panel to display the "System Properties" tree.
- In the "System Properties" tree, select the "audit" node.
- Beneath the "System Properties" tree, check "All Properties" control.
- Check the "Auditing Enabled" property to enable server audit logging in the database
- Check the "File Auditing Destination append" property.

Warning: Failure to check the "File Auditing Destination append" checkbox will cause the audit log file to be overwritten upon restart of the MetaMatrix Server; however, the overwritten records are not purged from the AuditEntries database table.

- Set the "File Auditing Destination filename" to a file path such as

`/opt/mmx/enterpriseserver/5.5.SP3/log/audit`

Warning: The MetaMatrix System Administrator (not root) is the owner of the audit data file and has full access to the audit log files, including the ability to open, modify, and delete records. The MetaMatrix System Administrator account ID and password must be protected and the user must avoid editing

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Common Criteria Supplement to the Administrative Guidance and accidentally modifying/erasing the audit log files in order to preserve the integrity of the audit.

- Check the “JDBC Auditing Destination Enabled” property.
- Press the "Apply" button to cause the server to begin logging audit events.
- Note that the audit log file may not exist until an auditable event occurs in the server.

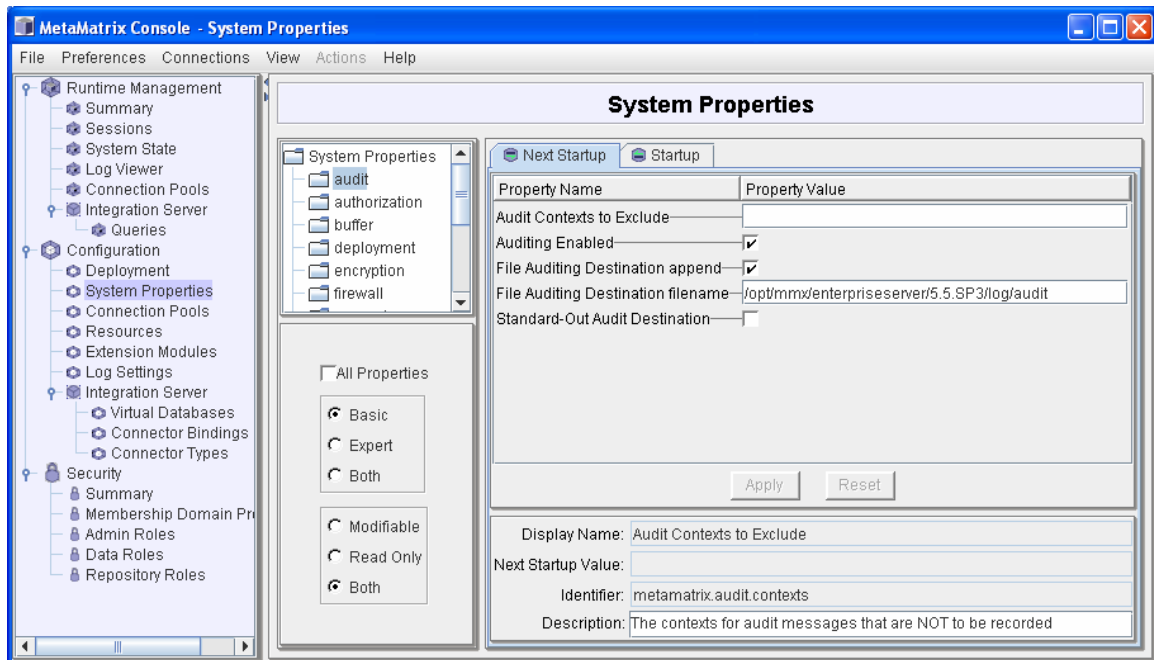


Figure 4 – MetaMatrix Console, Audit Log System Properties

- In the “System Properties” tree, select the “transaction” node.
- Check the property “Enable Data Source Command Logging”
- Check the property “Enable MetaMatrix Command Logging”
- Press the “Apply” button to cause the server to begin auditing command events.

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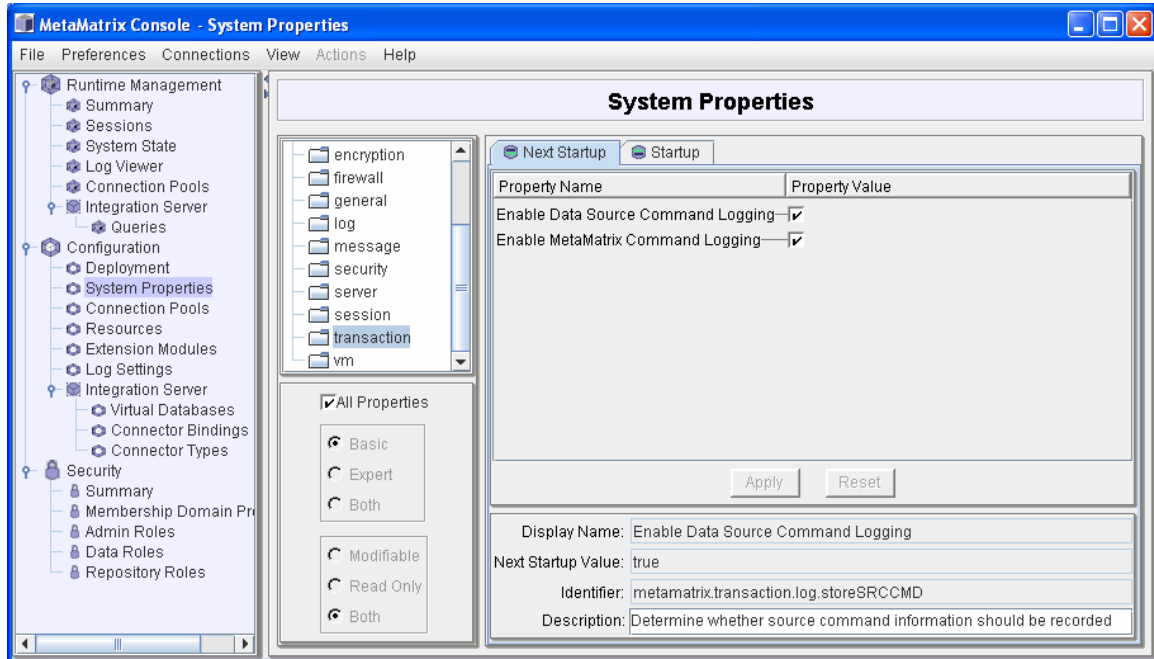
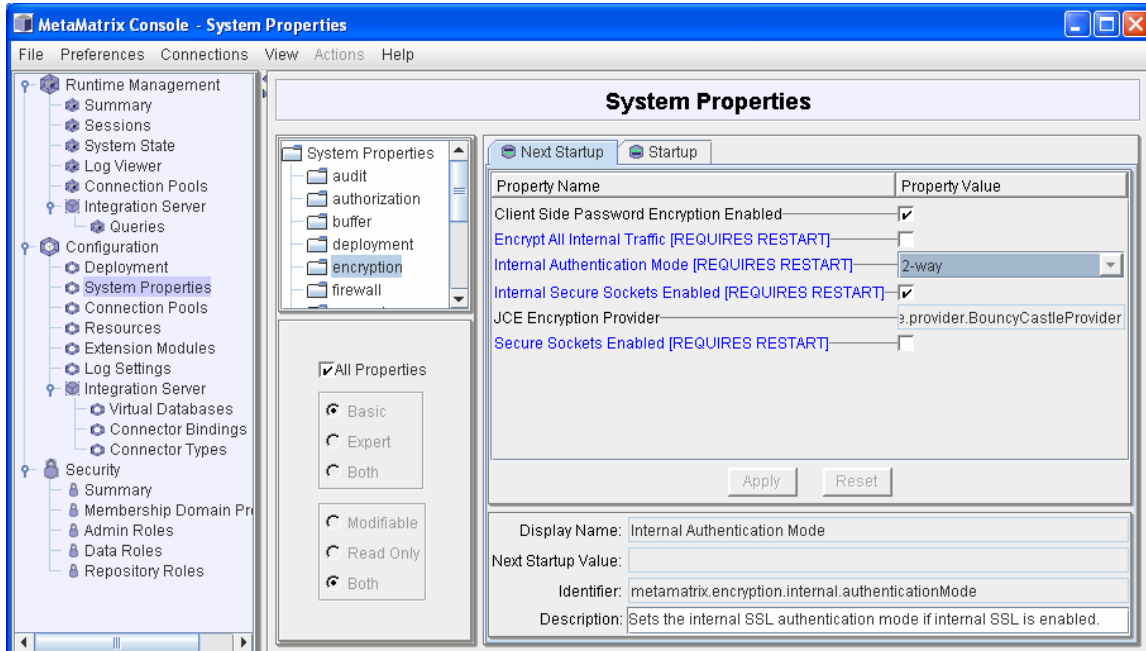


Figure 5 – MetaMatrix Console, Transaction Log System Properties

Configure the MetaMatrix Server for SSL

Refer to the MetaMatrix Enterprise SSL Guide, Version 5.5.3, Rev. A to configure the server for 2-way SSL encrypted communication. Specifically,

- Follow the section “Generating Self-Signed Certificates Quick Reference” twice; once for the server, and one for client-side communications.



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Figure 6 – MetaMatrix Console, Encryption System Properties

Restart the MetaMatrix Server

- Navigate to the directory `/opt/mmx/enterpriseserver/5.5.SP3/bin /`
- Running the script `./stopserver.sh`
- Running the script `./startserver.sh`

Warning: The stopserver and startserver scripts ignore arguments appended to the command line and continue execution as if no argument has been provided. Command line arguments are not used or checked by the scripts, and the user is not warned about incorrect or unnecessary arguments.

3.7 Verification of Evaluated TOE Components

After installation, the TOE Software may be verified to be the evaluated version by opening the process log on the server and examining the Component Release entry. The evaluated version has the value “Release 5.5.3 (Build 3126_0021)”. For example:

```
Mmm dd, YYYY hh:mm:ss.sss [SocketWorkerQueue_Worker_0|0] INFO  
<CONFIG|0> Component Release Release 5.5.3 (Build 3126_0021)
```

3.8 Admin Password Recommendations

MetaMatrix strongly recommends that the root password and other MetaMatrix administrative user passwords should be at least eight alphanumeric characters of mixed case and include at least one numeric character. The password should not be a word that appears in a dictionary.

Administrators with root access must be instructed to keep their passwords secret.

Warning: Changing the MetaMatrix Administrator inside the MetaMatrix Console may cause the Console to lock up after the Server has stored the new password. In this event, use the Windows Task Manager utility to end the Console application process. Restarting the MetaMatrix Console will verify that the MetaMatrix Administrator password has been properly modified.

4 Secure Operation

4.1 Authentication

MetaMatrix supports three types of Membership Domain Providers:

- LDAP Membership Domain – defines a connection to one or more LDAP servers
- File Membership Domain – obtains user and group credentials from a file (not recommended for production use)
- Custom Membership Domain – allows implementations of the MetaMatrix service provider interface (MembershipDomain SPI) to provide authentication and authorization.

Only the LDAP Membership Domain will be included in the evaluation.

4.2 Backup and Crash Recovery Procedures

To avoid losing all configuration, auditing and collected data in case of a catastrophic system failure, regular system backups should be scheduled.

To backup the configuration and auditing files for the MetaMatrix Server:

- Stop the MetaMatrix Server
- Make backup copies of all files underneath the server installation directory.
- Restart the MetaMatrix Server

To backup the operational database:

- Stop the MetaMatrix Server
- Follow the database vendor's guide for backing up the database
- Restart the MetaMatrix Server

The procedure for recovering the MetaMatrix Server configuration from a backup is as follows:

- Follow the database vendor's guide for backing up the database. Restore the data to the same database connection properties as provided for the installation of MetaMatrix Server, Section 3.2, such as the database hostname and port, and database specific details such as the database name.
- Restore the backed up files to the same location under the MetaMatrix Server, which should maintain the same host name as originally installed.
- Start the MetaMatrix Server

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4.3 *MMAAdmin Functionality*

Only the administrative and data access functionality of MMAAdmin will be included in the scope of the evaluation.

4.4 *Connectors*

MetaMatrix provides a Connector Development Kit (CDK) utility for defining, configuring, and testing new Connectors. (Custom developed Connectors will not be included in the scope of the evaluation.)

5 Acronyms and Terminology

Acronyms

Table 5-1 and Table 5-2 define product specific and CC specific acronyms respectively.

Table 5-1: Product Specific Acronyms

Acronym	Definition
ACI	Access Control Item
API	Application Programming Interface
CDK	Connector Development Kit
CLI	Command Line Interface
DBMS	Data Base Management System
EII	Enterprise Information Integration
EIS	Enterprise Information Systems
GUI	Graphical User Interface
JDBC	Java Database Connectivity
HTTP	HyperText Transfer Protocol
MMR	MetaMatrix Metadata Repository
ODBC	Open Database Connectivity
SOAP	Simple Object Access Protocol
SQL	Structured Query Language
UML	Unified Modeling Language
VDB	Virtual Database
XA	eXtended Architecture
XML	Extensible Markup Language

Table 5-2: CC Specific Acronyms

Acronym	Definition
CC	Common Criteria [for IT Security Evaluation]
EAL	Evaluation Assurance Level
IT	Information Technology
OSP	Organizational Security Policy
PP	Protection Profile
SAR	Security Assurance Requirement
SFP	Security Function Policy
SFR	Security Functional Requirement
ST	Security Target
TOE	Target of Evaluation
TSC	TSF Scope of Control
TSF	TOE Security Functions
TSFI	TOE Security Functions Interface
TSP	TOE Security Policy

MetaMatrix Enterprise Release 5.5.3

Common Criteria Supplement to the Administrative Guidance

Terminology

Table 5-3 and Table 5-4 define product-specific and CC-specific terminology respectively.

Table 5-3: Product-Specific Terminology

Term	Definition
Connector	A Connector represents a set of Java classes, including a Connector Connection and Connector Translator that handle the communications between the MetaMatrix Server and the enterprise information system.
Entitlement	A named set of access rights which control which data constructs, such as tables or columns, a user account can create, read, update, and / or delete.
Identity (ID)	A representation (e.g., a string) uniquely identifying an authorized user, which can either be the full or abbreviated name of that user or a pseudonym.
Membership Domain Providers	The third-party applications used to store and manage information about users.
Metabase	The previous name for the MetaMatrix Repository
Metadata	Metadata abstracts information from the database itself and becomes useful to describe the content of the enterprise information systems and to determine how a column in one enterprise information source relates to another, and how those two columns could be used together for a new purpose. A piece of Metadata, called a meta object in the MetaMatrix Designer, contains information about a specific information structure, irrespective of whatever individual data fields that may comprise that structure. Metadata is data about data.
MetaModeler	The previous name for the MetaMatrix Enterprise Designer
Virtual Model	An abstract view of the data sources
Virtual Database	A Virtual Database (VDB) is an abstraction that allows the user to treat the separate data sources that have been modeled and integrated within it, as a single ODBC data source. A VDB consists of models, categories, groups and elements.

Table 5-4: CC-Specific Terminology

Term	Definition
Authorized User	A user who may, in accordance with the TSP, perform an operation.
External IT Entity	Any IT product or system, untrusted or trusted, outside of the TOE that interacts with the TOE.
Role	A predefined set of rules establishing the allowed interactions between a user and the TOE.
TOE Security Functions (TSF)	A set consisting of all hardware, software, and firmware of the TOE that must be relied upon for the correct enforcement of the TSP.
User	Any entity (human user or external IT entity) outside the TOE that interacts with the TOE.