Desktop Underwriter Version 10.3 Update
MISMO Version 3.4 Early Readiness Release
Integration Impact Memo

Dec. 14, 2018

As announced in September 2016, in an effort to promote data standards in the mortgage industry, Fannie Mae and Freddie Mac (the GSEs) developed the redesigned Uniform Residential Loan Application (Form 1003) and the Uniform Loan Application Dataset (ULAD), a common dataset based on the Mortgage Industry Maintenance Organization® (MISMO®) Reference Model Version 3.4 (MISMO V3.4.0_B324).

Leveraging the MISMO Version 3.4 standard, Fannie Mae developed and published the new Desktop Underwriter® (DU®) Specification MISMO Version 3.4 (called the DU Spec). The DU Spec contains elements, attributes, enumerated values, and conditionality rules to create the new DU loan application submission file for Desktop Originator® (DO®) and/or DU.

Effective **Jan. 1, 2019,** DO/DU Version 10.3 will be updated in the **Fannie Mae Integration Test Environment** to accept the new DU loan application submission file via **XIS Direct Integration,** allowing lenders and technology solution providers time to complete development and testing prior to the DU production release in July 2019.

> **NOTE:** *For ease of reference, we use the term DU, which refers to Desktop Originator and Desktop Underwriter (DU/DO).*

DU User Interface and Direct Web Post

- The DU User Interface and Direct Web Post integration currently accepts a Fannie Mae 1003 Version 3.2 flat file and a MISMO AUS Version 2.3.1 XML file in the Fannie Mae Production and Integration Test Environments.
- The DU User Interface will be updated to accept the new DU loan application submission file in the Fannie Mae Production and Integration Test Environments in the second half of 2019. More information will be provided once a release date is confirmed.
- DO/DU Direct Web Post is not in scope for Early Readiness testing of the new DU loan application submission file.

DU for government loans (User Interface and Direct Integration)

DU for government loans is the component of DU that is used in conjunction with government loans for the Federal Housing Administration (FHA) and U.S. Department of Veterans Affairs (VA).

- DU for government loans currently accepts a Fannie Mae 1003 Version 3.2 flat file and MISMO AUS Version 2.3.1 XML file to support submission of FHA and VA loans to DU in the Fannie Mae Production and Integration Test Environments.
- Effective **Jan. 1, 2019**, DU for government loans (FHA and VA) will be updated in the **Fannie Mae Integration Test Environment** to accept the new DU loan application submission file via Direct Integration.
- DU for government loans via the DU User Interface will be updated to accept the new DU loan application submission file in the Fannie Mae Production Environment in the second half of 2019. More information will be provided once a release date is confirmed.

DU XIS Casefile Data Service

DU XIS Casefile Data Service allows for the import and export of loan application data and related files from the Fannie Mae Production and Integration Test Environments.

- DU XIS Casefile Data Service currently accepts a Fannie Mae 1003 Version 3.2 flat file and a MISMO AUS Version 2.3.1 XML file in the Fannie Mae Production and Integration Test Environments.
- Effective **Jan. 1, 2019,** DU XIS Casefile Data Service will be updated in the **Fannie Mae Integration Test Environment** to support import and export of the new DU loan application submission file via Direct Integration.
- DU XIS Casefile Data Service will be updated in the Fannie Mae Production Environment to accept the new DU loan application submission file in July 2019. More information will be provided once the release is confirmed.

EarlyCheck (User Interface and Direct Integration)

- EarlyCheck™ accepts a Fannie Mae 1003 Version 3.2 flat file, MISMO AUS Version 2.3.1 XML file and a ULDD/ MISMO v3.0 in the Fannie Mae Production and Integration Test Environments.
- Effective **Feb. 2019**, EarlyCheck Version 5.7.1 will be updated in the **Fannie Mae Integration Test Environment** to accept the new loan application submission file via **Direct Integration,** allowing lenders and technology solution providers time to complete development and testing prior to the EarlyCheck Production release in July 2019.
- The EarlyCheck User Interface will be updated to accept the new DU loan application submission file in the Fannie Mae Production and Integration Test Environments in the second half of 2019. More information will be provided once a release date is confirmed.

DU Spec Implementation Timeline

Integrated systems that display the Form 1003 loan application and/or interface with DO/DU, Credit Services, Casefile Data Service and EarlyCheck must transition to the redesigned Form 1003 and the new DU loan application submission file based on the new DU Spec by Feb. 1, 2020 to avoid any disruption in service.

Lenders and technology solution providers should work closely with business partners and Fannie Mae to ensure a smooth transition to the redesigned Form 1003 and new DU Spec.

2019	2020	2021

January 1, 2019
DU Integration test environment ready
DU accepts DU Spec MISMO v3.4

February 1, 2019
EarlyCheck Integration test environment ready
EarlyCheck accepts DU Spec MISMO v3.4

July 1, 2019
DU/EarlyCheck Production accepts DU Spec MISMO v3.4, 1003 v3.2 flat file, and MISMO v2.3.1 file transactions
Industry may begin using Redesigned 1003

February 1, 2020
New Applications (as of App Rec'd Date 2/1/2020 must be submitted to DU using DU Spec MISMO v3.4.
Pipeline loans (App Rec'd Dates < 2/1/2020) use the same formats as initially submitted. (e.g., construction loans)

February 1, 2021
DU Specification Transition Period End Date
Old 1003 forms no longer accepted. DU/EarlyCheck accepts only DU/EarlyCheck Transactions based on MISMO v3.4
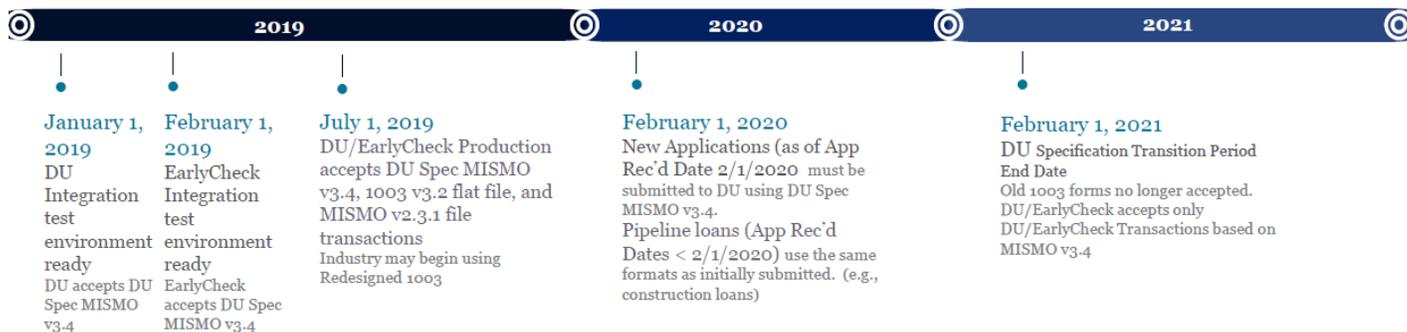
How will this affect my integrated system?

- Fannie Mae will require the use of the new DU loan application submission file for all new loans with an application received date on or after Feb. 1, 2020.
- Fannie Mae will continue to accept the legacy file formats, 1003 Version 3.2 and MISMO AUS Version 2.3.1 until Feb. 1, 2021, for applications dated before Feb. 1, 2020, which have not closed, e.g. construction loans.

Generating the DU Loan application submission file

Integrated systems must be capable of generating a well-formed loan application submission file based on the new DU Spec for submission to Fannie Mae. When a new DU loan application submission file is submitted to DU, the file will undergo a series of validation checks in progressive order, as described below. If one or more validation checks fail, the new DU loan application submission file will not be processed further, a Casefile ID will not be generated, validation will stop, and the file will not progress to the next level. A system error will be returned in the XIS STATUS Element and validation errors will be returned in the MP_STATUS_LOG in a new *Loan Application Data Errors* section and validation warnings will be returned in the MP_STATUS_LOG in a new *Loan Application Warnings* section.

This communication relates to the Uniform Mortgage Data Program® (UMDP®), an effort undertaken jointly by Fannie Mae and Freddie Mae at the direction of the Federal Housing Finance Agency, and aligns with the UMDP's focus on enhancing data quality, consistency, and clarity to strengthen the loan manufacturing process.

NEW DU Schema / Loan-Level File Validation		
DU Loan application submission file Validation (MISMO Version 3.4)		
Order	**Validation**	**Description**
1	Schema Validation	After import to DO and DU, the new DU loan application submission file will be validated against both the MISMO v3.4.0 Schema and the ULAD and DU extension Schemas. If the new DU loan application submission file does not validate against these Schema(s), the file will not be processed further and a Casefile ID will not be generated.
2	Cardinality	The DU Spec has cardinality restrictions. An error will be generated in DO and DU if the Cardinality does not adhere to the DU Spec, the file will not be processed further and a Casefile ID will not generated.
3	Label (Missing or Non-Unique)	1. All labels should be associated with the Containers listed in the ArcRole tab of the DU Spec. (ASSET, COUNSELING_EVENT, CURRENT_INCOME_ITEM, DU:UNDERWRITING_VERIFICATION, EMPLOYER, EXPENSE, LIABILITY, LOAN, ROLE). 2. The label shall be valid if it belongs to the parent container in the Source or Target columns of the ArcRole tab 3. Having the requirement of a Label does not mean that an ArcRole relationship must exist for each label. 4. A unique label is expected each time a container is declared in the submission file, that complies with #1 and #2 5. Not all labeled containers will have a relationship in the RELATIONSHIPS container. 6. If the above requirements are not followed, an error will be generated, the file will not be processed further, and a Casefile ID will not be generated.

4	ArcRole (Relationships)	ArcRoles are needed for situations where a relationship within the XML file is not established through containment. ArcRoles allow for relationships between containers in different areas of the file. These relationships can be established by following the list of available ArcRoles in the corresponding ArcRole tab of the DU Spec.
		ArcRoles require that all labels included in the ArcRole syntax are unique within the loan application submission file. This is necessary to create relationships without ambiguity. For example two assets cannot have the same label.
		An error will be generated in DO and DU if the ArcRole does not pass validation, the file will not be processed further, and a Casefile ID will not be generated.
		To prevent validation errors, ensure the construction of the ArcRole is correct and unique. For more information on the notation and a step-by-step explanation describing how to build ArcRoles, refer to the DU Spec, Arc Roles tab, and to the GSE Joint publication:
		https://www.fanniemae.com/content/technology_requirements/ulad-data-relationships.pdf
5	Warnings	After the new DU loan application submission file passes the initial series of schema and loan-level file validation checks, the file will be checked for the presence of Warning conditions. Although Warnings will not stop the file from processing, issues should be corrected prior to resubmission. Warning messages may indicate data integrity issues, e.g. borrower SSN provided with type of EIN or a missing party role type.

How will this affect my integrated system?

A DU wrapper schema will be provided to assist in the implementation of the DU loan application submission file. The wrapper imports and instantiates the ULAD and DU extension schemas and helps to validate the loan application submission file by restricting only to the correct containers under the extensions.

The purpose of the DU_Wrapper_3.4.0_B324.xsd is to:

- Import and instantiate the ULAD and DU extensions in the same Schema file.
- Validate the location of the ULAD and/or DU EXTENSION containers in the DU loan application submission file.

To implement the DU wrapper schema to validate a DU loan application submission file, it first must be placed in the same folder as the following:

- All MISMO Schema files included in version 3.4.0_B324 (available at www.mismo.org)
- The ULAD Data Extension to MISMO v3.4 (ULAD_ExtensionV3_4.xsd)
- The Fannie Mae DU Extension schema (DU_ExtensionV3_4.xsd)

The ULAD and DU extension schemas are available on the Technology Integration page.

Once the DU wrapper schema is placed in the same folder as the files described above, you will need to associate the new DU loan application submission file with the DU wrapper schema file using an XML development tool. Having an instance of "xsi:schemaLocation=" in the MESSAGE tag pointing to the file location of the DU wrapper schema will ensure that your new DU loan application submission file is validating against that schema.

Example of xml header in the loan application submission file:

```
<?xml version="1.0" encoding="UTF-8"?>
]<MESSAGE xmlns="http://www.mismo.org/residential/2009/schemas" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:ULAD="
http://www.datamodelextension.org/Schema/ULAD" xmlns:DU="http://www.datamodelextension.org/Schema/DU" MISMOReferenceModelIdentifier="
3.4.032420160128" xmlns:xlink="http://www.w3.org/1999/xlink" xsi:schemaLocation="http://www.mismo.org/residential/2009/schemas
DU_Wrapper_3.4.0_B324.xsd">
```

How the DU Wrapper Schema Accomplishes the Tasks Above

Import and Instantiate ULAD and DU Extensions

The DU wrapper schema will import both the ULAD and DU namespaces in the same schema document. These namespaces are instantiated in the respective extension schema files:

1. ULAD_ExtensionV3_4.xsd (namespace = "ULAD:")
2. DU_ExtensionV3_4.xsd (namespace = "DU:")

If you are implementing the extensions in phases (e.g., adding the ULAD extensions first then the DU extensions or vice versa), you can remove/comment out the instantiation of either of the namespaces so it will only validate the namespace you are currently implementing.

Validates the location of ULAD and/or DU EXTENSION containers in the DU loan application submission file

All ULAD and DU extension containers have the following XPATH in front of the actual extension container name: EXTENSION/OTHER.

The DU wrapper schema puts a restriction on each OTHER container to select from a group which includes the name of one specific EXTENSION container (e.g. LOAN_EXTENSION).

By placing this restriction in the DU wrapper schema, it ensures that each EXTENSION container is only allowed in the XPATH it is extending the MISMO 3.4.0_B324 schema.

LOAN_EXTENSION can only be added under the XPATH: **LOAN/EXTENSION/OTHER/LOAN_EXTENSION** and ASSET_DETAIL_EXTENSION can only be added under the XPATH: **ASSET_DETAIL/EXTENSION/OTHER/ASSET_DETAIL_EXTENSION.**

Using this DU wrapper schema with these added restrictions will reduce the possibility of EXTENSION containers being implemented in the wrong location of the DU loan application submission file.

DU Errors and Warning Types
Integrated systems that parse errors returned in the XIS Control Output and/or MP_STATUS_LOG may require updates to support the new DU schema and loan-level file validation process, and related error and warning messages. DU will introduce new XIS system-level error codes as denoted below in bold type. *See Appendix A for sample error messages and warnings.*

DO / DU UNDERWRITE_RESPONSE, XIS Control Output (CO), STATUS Element				
XIS System Error				
Action	**Attribute**	**Format**	**Value**	**Description**
Existing Value	_Condition	String	FAILURE	System error returned in the XIS Control Output (CO) response file if the DU loan application submission file fails Schema or Loan-Level File Validation.
Existing Value	_Name	String	SBAWF1.3	
New Value	_Description	String	**Loan Validation Error**	
New Value	_Code	String	**321**	Related error messages returned in the MP_STATUS_LOG Business Output response file.
Sample				
Content-Disposition: form-data; name="CO"; filename="CO" <?xml version="1.0" encoding="UTF-8"?> <DU_UNDERWRITE_RESPONSE> <STATUS _Condition="FAILURE" _Name="SBAWF1.3" _Description="**Loan Validation Error**" _Code="**321**"/> </DU_UNDERWRITE_RESPONSE>				

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DO / DU UNDERWRITE_RESPONSE, XIS Control Output (CO), STATUS Element				
XIS System Error				

Action	Attribute	Format	Value	Description
Existing Value	_Condition	String	FAILURE	System error returned in the XIS Control Output (CO) response file if the DU loan application XML file fails import. MP_STATUS_LOG Business Output response file.
Existing Value	_Name	String	SBAWF1.3	
New Value	_Description	String	**Loan Validation Error**	
New Value	_Code	String	**142308**	
Sample				
Content-Disposition: form-data; name="CO"; filename="CO" <?xml version="1.0" encoding="UTF-8"?> <DU_UNDERWRITE_RESPONSE> <STATUS _Condition="**FAILURE**" _Name="SBAWF1.3" _Description="**Loan Validation Error**" _Code="**142308**"/> </DU_UNDERWRITE_RESPONSE>				

MP_STATUS_LOG		
Action	**Section**	**Description**
New	Loan Application Data Errors	New section of the MP_STATUS_LOG returned in the XIS Business Output response file, applicable to DU loan application submission file submissions. Depending on the STATUS of the request, the MP_STATUS_LOG can contain up to four sections in the following order: Loan Application Data Errors, Import Log, Credit Log and Underwriting Checklist. Contains detailed error messages including raw Schema Validation errors, Loan-Level File Validation Errors, Credit errors, and Underwriting Checklist errors.

DU XIS Request Structure

MIME Header

XML Integration Services (XIS) uses standard Internet protocols and technologies to provide seamless integration to Fannie Mae business services. The XIS request (HTTP Post) to Fannie Mae's XML Gateway consists of a multipart MIME (Multipurpose Internet Mail Extensions) which contains the request XML files and any business data files.

The MIME is comprised of three parts:

- Routing Input, RI: XML file containing information that identifies the requestor, business service and transaction model.
- Control Input, CI: XML file containing data required by the business service not that may not be supported in the Business Input/loan application submission file.
- Business Input, BI: file containing the business data required by the service, e.g., new DU loan application submission file.

How will this affect my integrated system?

To support the new DU loan application submission file, integrated systems that currently submit the 1003 Version 3.2 flat file to DU via Direct Integration should update the MIME Header of the XIS Request to identify the data file type included as Business Input (BI).

XIS Business Input				
Action	**MIME Section**	**Content-Disposition**	**Name**	**Description**
Existing Value	Business Input	form-data	LOAN_APPLICATION	Existing value supported for MISMO AUS 2.3.1 expanded to support the MISMO Version 3.4 data file.
Sample:				
Content-Disposition: form-data; name="LOAN_APPLICATION"				

XIS Control Input

Integrated Systems must be updated to support changes to the DATA_FILE element and in certain requests, the RETURN_FILE element of the XIS Control Input to support submissions of the new DU loan application submission file. The following examples are provided to reinforce guidance described in the XIS Integration Guides.

DU_UNDERWRITE_REQUEST – XIS Control Input (CI) ELEMENT: DATA_FILE					
This service is used to process requests to underwrite a loan with Fannie Mae's Desktop Underwriter					
Action	Attribute	Format	Required	Value	Description
Existing Value	_Type	Integer	Y	1003 MISMO	New DU loan application submission file
New Value	_VersionNumber	String	Y	3.4	MISMO Version 3.4
Existing Value	_Name	String	Y	LOAN_APPLICATION	New DU loan application submission file
Sample:					
Content-Disposition: form-data; name="CI" <?xml version="1.0" encoding="UTF-8"?> <DU_UNDERWRITE_REQUEST> <CREDIT CopyLiabilitiesIndicator="0"> <SERVICE_PROVIDER _Name="200" _AccountNumber="XXXX _Password="XXXX"/> </CREDIT> <FANNIEMAE_UNDERWRITING_ENGINE _Name="DU"/> <_RETURN_FILE _FileType="3"/> <SOFTWARE_PROVIDER _AccountNumber="XXXXXXXXX"/> **<DATA_FILE _Type="1003 MISMO" _VersionNumber="3.4" _Name="LOAN_APPLICATION"/>** </DU_UNDERWRITE_REQUEST>					

DU_GET_CREDIT_REQUEST – Control Input (CI) ELEMENT: DATA_FILE

The Credit Service (GetCredit) is used to process credit requests from Fannie Mae's direct integrated credit agencies and affiliates.

Action	Attribute	Format	Required	Value	Description
Existing Value	_Type	Integer	Y	1003 MISMO	New DU loan application submission file
New Value	_VersionNumber	String	Y	3.4	MISMO Version 3.4
Existing Value	_Name	String	Y	LOAN_APPLICATION	New DU loan application submission file

Sample:

Content-Disposition: form-data; name="CI"

<?xml version="1.0" encoding="UTF-8"?>

<DU_GET_CREDIT_REQUEST CopyLiabilitiesIndicator="0">

<SERVICE_PROVIDER _Name="200" _AccountNumber="account" _Password="pass"/>

<CREDIT_INFORMATION SSN="991919991" CreditReportIdentifier="text" CreditRequestType="0"/>

<_RETURN_FILE _FileType="6"/>

<_RETURN_FILE _FileType="7"/>

<_RETURN_FILE _FileType="8"/>

<SOFTWARE_PROVIDER _AccountNumber="account"/>

<DATA_FILE _Type="1003 MISMO" _VersionNumber="3.4" _Name="LOAN_APPLICATION"/>

</DU_GET_CREDIT_REQUEST>

DO_UNDERWRITE_REQUEST – XIS Control Input (CI) ELEMENT: DATA_FILE

This service is used to process requests to underwrite a loan with Fannie Mae's Desktop Originator

Action	Attribute	Format	Required	Value	Description
Existing	_Type	Integer	Y	1003 MISMO	New DU loan application submission file
New Value	_VersionNumber	String	Y	3.4	MISMO Version 3.4
Existing Value	_Name	String	Y	LOAN_APPLICATION	New DU loan application submission file

Sample:

Content-Disposition: form-data; name="CI"

<?xml version="1.0" encoding="UTF-8"?>

<DU_GET_CREDIT_REQUEST CopyLiabilitiesIndicator="0">

<SERVICE_PROVIDER _Name="200" _AccountNumber="account" _Password="pass"/>

<CREDIT_INFORMATION SSN="991919991" CreditReportIdentifier="text" CreditRequestType="0"/>

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DO_UNDERWRITE_REQUEST – XIS Control Input (CI) ELEMENT: DATA_FILE

This service is used to process requests to underwrite a loan with Fannie Mae's Desktop Originator

Action	Attribute	Format	Required	Value	Description
<_RETURN_FILE _FileType="6"/>					
<_RETURN_FILE _FileType="7"/>					
<_RETURN_FILE _FileType="8"/>					
<SOFTWARE_PROVIDER _AccountNumber="C"/>					
<DATA_FILE _Type="1003 MISMO" _VersionNumber="3.4" _Name="LOAN_APPLICATION"/>					
</DU_GET_CREDIT_REQUEST>					

Casefile Data Service   CASEFILE_IMPORT_REQUEST, Control Input, ELEMENT: DATA_FILE

This service allows for the import and export of loan application data into the Fannie Mae environment

Action	Attribute	Format	Required	Value	Description
Existing Value	_Type	Integer	Y	1	New DU loan application submission file
Existing Value	_FormatType	String	Y	5	MISMO XML
New Value	_VersionNumber	String	Y	3.4	MISMO Version 3.4
Existing Value	_Name	String	Y	LOAN_APPLICATION	New DU loan application submission file

Sample:

Content-Disposition: form-data; name="CI"

<?xml version="1.0" encoding="UTF-8"?>

<CASEFILE_IMPORT_REQUEST MORNETPlusCasefileIdentifier="1234567890" LenderInstitutionIdentifier="1234">

  <SOFTWARE_PROVIDER _AccountNumber="ACCOUNT"/>

  <DATA_FILE _Type="1" _FormatType="5" _VersionNumber="3.4" _Name="LOAN_APPLICATION"/>

</CASEFILE_IMPORT_REQUEST>

Casefile Data Service CASEFILE_ EXPORT_REQUEST, ELEMENT: _RETURN_FILE						
This service allows for the import and export of loan application data into the Fannie Mae environment						

Action	Attribute	Format	Required	Value	Description
Existing Value	_Type	Integer	Y	1	New DU loan application submission file
Existing Value	_FormatType	String	Y	5	MISMO XML
New Value	_VersionNumber	String	Y	3.4	MISMO Version 3.4
Existing Value	_Name	String	Y	LOAN_APPLICATION	New DU loan application submission file

Sample:

Content-Disposition: form-data; name="CI"

<?xml version="1.0" encoding="UTF-8"?>

<CASEFILE_EXPORT_REQUEST MORNETPlusCasefileIdentifier="" LenderInstitutionIdentifier="">

<_RETURN_FILE _Type="1" _FormatType="5" _VersionNumber="3.4"/>

</CASEFILE_EXPORT_REQUEST>

| EARLYCHECK_CHECK_REQUEST, XIS CONTROL INPUT (CI) ELEMENT: DATA_FILE ||||||

Action	Attribute	Format	Required	Value	Description
New Value	_Type	Integer	Y	ULAD	New DU loan application submission file
New Value	_VersionNumber	String	Y	3.4	MISMO Version 3.4
Existing Value	_Name	String	Y	LOAN_APPLICATION	New DU loan application submission file

Sample:

Content-Disposition: form-data; name="CI"

<?xml version="1.0" encoding="UTF-8"?>

<EARLYCHECK_CHECK_REQUEST

MORNETPlusCasefileIdentifier="1987654321"

LenderInstitutionIdentifier="123456"

LenderCaseIdentifier="654321">

<SOFTWARE_PROVIDER _AccountNumber="987654XIS"/>

<DATA_FILE _Type="ULAD" _VersionNumber="3.4" _Name="LOAN_APPLICATION"/>

<_RETURN_FILE _Type="132" _FormatType="5"/>

<_RETURN_FILE _Type="132" _FormatType="3"/>

</EARLYCHECK_CHECK_REQUEST

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```
Content-Disposition: form-data; name="CI"
<?xml version="1.0" encoding="UTF-8"?>
<EARLYCHECK_CHECK_REQUEST
MORNETPlusCasefileIdentifier="1987654321"
LenderInstitutionIdentifier="123456"
LenderCaseIdentifier="654321">
<SOFTWARE_PROVIDER _AccountNumber="987654XIS"/>
<DATA_FILE _Type="ULAD" _VersionNumber="3.4" _Name="LOAN_APPLICATION"/>
<_RETURN_FILE _Type="128" _FormatType="5"/>
<_RETURN_FILE _Type="128" _FormatType="3"/>
</EARLYCHECK_CHECK_REQUEST
```

Additional Resources

To support the transition to the new DU loan application submission file based on the DU Spec, review the DU Implementation Guide MISMO V3.4 and related artifacts available on Fannie Mae's Uniform Residential Loan Application page and Technology Integration page.

- Review key dates for the URLA and DU Spec Implementation Timeline.
- Update your loan application submission file based on the new DU Spec.

Related Resources	Description
DU Spec Implementation Guide MISMO V3.4	Assists lenders and technology solution providers in planning and implementing the new DU Spec. Designed as a supplement to the new DU Spec it provides an overview of the data architecture, including reference information about the allowable structures, sequence numbers, arc roles, and additional information about the conditionality and format of the new DU loan submission files. It also describes how to translate loan submission files from the Residential Loan Data 1003 Version 3.2 flat file and the MISMO Version 2.3.1 XML file formats to the DU Spec.
DU Specification MISMO V3.4 (DU Spec)	New Fannie Mae DU XML Data Requirements Specification.
Fannie Mae DU Schema Extension	The Fannie Mae DU Schema Extension contains data that is not included in MISMO Version 3.4. This schema extension must be downloaded and implemented along with the new DU Spec when creating your loan submission files and testing your schema validation prior to submission to DU. DU will use this schema extension as part of its loan submission file validation process.
Numbered Form 1003	A numbered version of the redesigned Form 1003 that shows the field name (numbered) on the form that relates to the corresponding data point in the new DU Spec.
Residential Loan Data Format, 1003 V3.2	Fannie Mae 1003 Version 3.2 DU Data Specification (Legacy)
MISMO AUS v2.3.1 Underwriting Requirements	MISMO AUS Version 2.3.1 File Format with DU Extensions (Legacy)
The ULAD Mapping Document	A simple spreadsheet that shows each field on the redesigned Form 1003 and its corresponding data point in the MISMO Version 3.4 reference model. This is not the DU Spec.
XIS Integration Guides DO, DU, EarlyCheck and Casefile Data Service.	Integration guides are available upon request. Please contact Integration Support or your Fannie Mae representative.

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Related Resources	Description
DU MISMO v3.4 Test Cases	Test cases will be published no later than January 18, 2018

Release Support

If you have questions regarding this memo, or require support specific to these changes, please contact Release Support or your Fannie Mae Representative.

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Appendix A

Examples of MISMO v3.4 related error messages generated by DO and DU.

Error Type	Message Text
Schema Validation Error	**The following are examples of *raw* schema validation errors:**
	cvc-fractionDigits-valid: Value '9000.123456789' has 9 fraction digits, but the number of fraction digits has been limited to 2.
	cvc-enumeration-valid: Value 'BadAssetTypeAgain' is not facet-valid with respect to enumeration '[Annuity, Automobile, Boat, Bond, BorrowerEstimatedTotalAssets, BorrowerPrimaryHome, BridgeLoanNotDeposited, CashOnHand, CertificateOfDepositTimeDeposit, CheckingAccount, EarnestMoneyCashDepositTowardPurchase, EmployerAssistance, GiftOfCash, GiftOfPropertyEquity, GiftsTotal, Grant, IndividualDevelopmentAccount, LifeInsurance, MoneyMarketFund, MutualFund, NetWorthOfBusinessOwned, Other, PendingNetSaleProceedsFromRealEstateAssets, ProceedsFromSaleOfNonRealEstateAsset, ProceedsFromSecuredLoan, ProceedsFromUnsecuredLoan, RealEstateOwned, RecreationalVehicle, RelocationMoney, RetirementFund, SaleOtherAssets, SavingsAccount, SavingsBond, SeverancePackage, Stock, StockOptions, TrustAccount]'. It must be a value from the enumeration.
Cardinality Error	**The DU Spec has cardinality restrictions. This is a complete list of the associated warnings:**
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL – One container is required (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL - Only one occurrence allowed (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/LOANS/LOAN/ LOAN_ROLE_TYPE - Only one occurrence of 'SubjectLoan' allowed (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/COLLATERALS/COLLATERAL - Only one occurrence allowed per DEAL (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/LOANS/LOAN/CLOSING_INFORMATION/CLOSING_ADJUSTMENT_ITEMS/CLOSING_ADJUSTMENT_ITEM/ CLOSING_ADJUSTMENT_ITEM_DETAIL - Only one occurrence allowed per LOAN (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/LOANS/LOAN/ADJUSTMENT/INT

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Error Type	Message Text
	EREST_RATE_ADJUSTMENT/INDEX_RULES/INDEX_RULE - Only one occurrence allowed per LOAN (loan application could not be processed).
	ERROR - ESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/LOANS/LOAN/ORIGINATION_FUNDS/ORIGINATION_FUND - Only one occurrence allowed per LOAN (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/PARTIES/PARTY/ROLES/ROLE/BORROWER/MILITARY_SERVICES/MILITARY_SERVICE - Only one occurrence allowed per BORROWER (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/COLLATERALS/COLLATERAL/SUBJECT_PROPERTY/PROPERTY_VALUATIONS/PROPERTY_VALUATION - Only one occurrence allowed per DEAL (loan application could not be processed).
	ERROR - MESSAGE/DEAL_SETS/DEAL_SET/DEALS/DEAL/COLLATERALS/COLLATERAL/SUBJECT_PROPERTY/SALES_CONTRACTS/SALES_CONTRACT - Only one occurrence allowed per DEAL (loan application could not be processed).
Missing or Non-Unique Label Errors	Every container that contains a LABEL field must have a value for LABEL and the label must be unique across the loan application (except if it used in the RELATIONSHIP container to relate the item to another item). This is a complete list of associated error messages:

ERROR – ROLE / LABEL – Value required (loan application could not be processed because no value provided).

ERROR – ROLE / LABEL – Unique value required (loan application could not be processed because value not unique within section).

ERROR – EXPENSE / LABEL – Value required (loan application could not be processed because no value provided).

ERROR – EXPENSE / LABEL – Unique value required (loan application could not be processed because value because "<label value>" occurred more than once).

ERROR – ASSET / LABEL – Value required (loan application could not be processed because no value provided).

ERROR – ASSET / LABEL – Unique value required (loan application could not be processed because value not unique within section).

ERROR – LIABILITY / LABEL – Value required (loan application could not be processed because no value provided). |

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Error Type	Message Text
	ERROR – LIABILITY / LABEL – Unique value required (loan application could not be processed because value not unique within section).
	ERROR – CURRENT_INCOME_ITEM / LABEL – Value required (loan application could not be processed because no value provided).
	ERROR – CURRENT_INCOME_ITEM / LABEL – Unique value required (loan application could not be processed because value not unique within section).
	ERROR – UNDERWRITING_VERIFICATION / LABEL – Value required (loan application could not be processed because no value provided).
	ERROR – UNDERWRITING_VERIFICATION / LABEL – Unique value required (loan application could not be processed because value not unique within section).
	ERROR – COUNSELING_EVENT / LABEL – Value required (loan application could not be processed because no value provided).
	ERROR – COUNSELING_EVENT / LABEL – Unique value required (loan application could not be processed because value not unique within section).
	ERROR – EMPLOYER / LABEL – Value required (loan application could not be processed because no value provided).
	ERROR – EMPLOYER / LABEL – Unique value required (loan application could not be processed because value not unique within section).
	ERROR – LOAN / LABEL – Value required (loan application could not be processed because no value provided).
	ERROR – LOAN / LABEL – Unique value required (loan application could not be processed because value not unique within section).
Missing Required Relationship Errors	If all label checks have passed, the system will generate an error for each occurrence of asset, liability and expense that is not associated with a borrower:
	ERROR - ASSET - Item labeled '<label>' must have a RELATIONSHIP to a borrower (loan application could not be processed).
	ERROR - LIABILITY - Item labeled '<label>' must have a RELATIONSHIP to a borrower (loan application could not be processed).

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Error Type	Message Text
	ERROR - EXPENSE - Item labeled '<label>' must have a RELATIONSHIP to a borrower (loan application could not be processed).
Invalid Relationship Error	The system checks each occurrence of RELATIONSHIP included in a 3.4 loan application file: ERROR - RELATIONSHIP – Values required for XLINK:FROM, XLINK:TO and XLINK:ARCROLE fields (loan application could not be processed due to values missing for one or more of these fields). ERROR - RELATIONSHIP – For EXPENSE_IsAssociatedWith_ROLE relationship, from LABEL <from label> refers to an item that does not exist in the expected location (loan application could not be processed). ERROR - RELATIONSHIP – For EXPENSE_IsAssociatedWith_ROLE relationship, to LABEL <to label> refers to an item that does not exist in the expected location (loan application could not be processed). ERROR - RELATIONSHIP - For ROLE_SharesSufficientAssetsAndLiabilitiesWith_ROLE relationship with labels <from label> and <to label>, one or both labels were already used to relate borrowers (loan application could not be processed).

The following are examples of warning messages associated with submissions of the DU loan application submission file.

Warning Type	Message Text
Invalid Employment Status Type	WARNING - EMPLOYMENT / STATUS_TYPE - Value expected to be 'Current' when EMPLOYMENT / CLASSIFICATION TYPE = 'Primary' ('Previous' dropped).
Invalid Enumeration	A warning like this will be generated when an enumeration is valid in the 3.4 schema but not in new DU spec: WARNING - MORTGAGE_LOAN / AMORTIZATION_TYPE - Valid value required ('Step' dropped).
Invalid Indicator	WARNING - DECLARATION / PARTY_TO_LAWSUIT_INDICATOR - 'true' or 'false' required ('1' dropped). WARNING - GOVERNMENT_MONITORING / RACE_REFUSAL_INDICATOR - 'true' or 'false' required ('0' dropped).

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Warning Type	Message Text
Invalid Loan Role Type	**When either of these warnings are generated, none of the associated loan data is used in processing:** WARNING - MORTGAGE_LOAN / LOAN_ROLE_TYPE - 'SubjectLoan' or 'RelatedLoan' required (all mortgage loan data dropped because no value provided). WARNING - MORTGAGE_LOAN / LOAN_ROLE_TYPE - 'SubjectLoan' or 'RelatedLoan' required (all mortgage loan data dropped due to invalid value "HistoricalLoan").
Invalid Party Role Type	When this warning is generated, none of the associated party role data is used in processing: WARNING - PARTY_ROLE / ROLE_TYPE - Valid value required (associated party role data dropped because no value provided).
Invalid State Code	State Code is defined as a string in the MISMO 3.4 spec but is treated by the DU systems as an enumeration so these warnings are possible: WARNING - RESIDENCE_ADDRESS / STATE_CODE - Valid value required ('x' dropped). WARNING - EMPLOYMENT_ADDRESS / STATE_CODE - Valid value required ('x' dropped). WARNING - SUBJECT_PROPERTY_ADDRESS / STATE_CODE - Valid value required ('x' dropped). WARNING - REAL_ESTATE_OWNED_ADDRESS / STATE_CODE - Valid value required ('x' dropped). WARNING - LOAN_ORIGINATION_COMPANY_ADDRESS / STATE_CODE - Valid value required ('x' dropped). WARNING - BORROWER_ADDRESS / STATE_CODE - Valid value required ('x' dropped).

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Warning Type	Message Text
Invalid Taxpayer ID	WARNING - TAXPAYER_IDENTIFIER / TAXPAYER_IDENTIFIER_VALUE - 999999999 format required (invalid value dropped). WARNING – BORROWER_TAXPAYER_IDENTIFIER / IDENTIFIER_TYPE – Only selected values are valid for a borrower taxpayer identifier (Identifier value dropped due to invalid identifier type 'EIN').
Enumeration Not Yet Supported	There is a small number of cases in which the new DU Spec includes an enumerated value but the value cannot yet be processed by Desktop Underwriter. In this case, the field value is nulled out prior to additional processing. Examples: WARNING - INCOME / INCOME_TYPE - Value not yet supported by Desktop Underwriter ('SeparateMaintenance' dropped). WARNING - ASSET / FUNDS_SOURCE_TYPE - Value not yet supported by Desktop Underwriter ('Institutional' dropped). WARNING - HOUSING_EXPENSE / PAYMENT_TYPE - Value not yet supported by Desktop Underwriter ('SupplementalPropertyInsurance' dropped). WARNING - INCOME / INCOME_TYPE - Value not yet supported by Desktop Underwriter ('SeparateMaintenance' dropped). WARNING - INCOME / INCOME_TYPE - Value not yet supported by Desktop Underwriter ('ContractBasis' dropped). WARNING - INCOME / INCOME_TYPE - Value not yet supported by Desktop Underwriter ('SeparateMaintenance' dropped). WARNING - INCOME / INCOME_TYPE - Value not yet supported by Desktop Underwriter ('ContractBasis' dropped). WARNING - INCOME / INCOME_TYPE - Value not yet supported by Desktop Underwriter ('HousingAllowance' dropped).

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Warning Type	Message Text
	WARNING - LIABILITY / LIABILITY_TYPE - Value not yet supported by Desktop Underwriter ('CollectionsJudgmentsAndLiens' dropped).