

ARIS REPORT SCRIPT CHANGES



ARIS 9.8 SR6
October 2016

For migrating your ARIS report scripts from ARIS 7 to ARIS 9, please refer to ARIS Report Script Changes from ARIS 7.2.4 to ARIS 9.8 SR4. This document only outlines the changes between ARIS 9.8 SR4 and 9.8 SR6.

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28 Useful report hints

This document describes the report script language differences between ARIS 9.8 SR4 and 9.8 SR6 and ARIS 7.2.4 and ARIS 9.8 SR4.

(In most cases) the removed methods can still be called, but they have no function any more and should be removed/replaced from/in the script.

The deprecated methods should not be used any more. They are replaced by functions which are more suitable in ARIS 9.

For a description of the added methods please refer to the online help for ARIS Script.

Some attributes that exist for the most items Creator, time of creation, last modifier, time of last modification are now directly accessible via methods as item properties.

Please note, that the report scripts themselves do not exist on the server's file system any more. Instead they are stored in a database. So all script import/export/delete operations have only an effect on the (system) database content and do not touch the file system any more.

Changes from 9.8 SR4 to 9.8 SR6

New constants:

Additionally, there are new attribute/model/cxn/lane/symbol type constants in ARIS metamodel.

Since the ARIS report now additionally supports ARCM reports, there are new classes and constants especially for ARCM reports.

The ARCM constants can be found in the help:

http://localhost/abs/help/en/script/ba/index.htm#report_CONSTANTS_ARCMConstants.htm

http://localhost/abs/help/en/script/ba/index.htm#report_CONSTANTS_ARCMEnumerations.htm

http://localhost/abs/help/en/script/ba/index.htm#report_CONSTANTS_ARCMEvaluations.htm

http://localhost/abs/help/en/script/ba/index.htm#report_CONSTANTS_ARCMJobStatus.htm

http://localhost/abs/help/en/script/ba/index.htm#report_CONSTANTS_ARCMLists.htm

http://localhost/abs/help/en/script/ba/index.htm#report_CONSTANTS_ARCMObjectTypes.htm

The output object now supports odd/even section definitions:

SECTION_EVEN (ArisSectionConstants)

SECTION_ODD (ArisSectionConstants)

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
New report component DocumentStorage („ADS“):				
ADSDocument	X			
ADSDocumentAttribute	X			
ADSDocumentMetaInfo	X			
ADSFolder	X			
ADSRepository	X			
New report component ARCM and its additional classes to communicate with the ARCM server:				
ARCM	X			
ARCMClientRepresentation	X			
ARCMJobId	X			
ARCMJobResponse	X			
AppObject	X			
AppObjectAttribute	X			
AppObjectDataSource	X			
ChartDataSource	X			
EvaluationDataSource	X			
GroupInfo	X			
HeaderCell	X			
HeaderInfo	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Iterable	X			
ListDataSource	X			
ListViewObject	X			
ReportDataSource	X			
ReportFilterableDataSource	X			
ReportIcon	X			
ReportService	X			
ReportValue	X			
UserInfo	X			
New report component DataQuery to execute fast database queries:				
DataQuery	X			
DataQueryFactory	X			
QueryTree	X			
Result	X			
ResultTree	X			
New report component "AlfabetIntegration" to automate the import functionality from Alfabet:				
AlfabetIntegration.importTables(Group, String[]) -> boolean	X			
AlfabetIntegration.isAvailable(Database) -> boolean	X			
AlfabetIntegration.removeAll(Database, int) -> boolean	X			
AlfabetIntegration.synchronize(Database, int) -> boolean	X			
New standard report API methods:				
ComObjOcc.setPicture(byte[], String) -> boolean defines/overwrites the picture in a model	X			
Model.canWrite(boolean bCheckAccessPermissions) -> boolean Checks whether the model can be changed by the current report	X			
Model.createPicture(int, int, int, int, byte[], String) -> ComObjOcc Adds a new picture to a model	X			
ModelOptions.getLayoutParameters(int) -> LayoutParameters Returns the layout parameters for a model type	X			
ServerAdmin.renameDatabase(String, String, boolean) -> boolean Renames a database.	X			
UmcPrivilege.getAssignedSeats() -> Long	X			
UmcUsergroup.getPermissionSeats() -> Map	X			
User.AccessRights(Group, boolean) -> int: new method with additional parameter to retrieve full rights including user groups	X			
UserDialog.setBrowseClientFolders(String, String, String, boolean) -> void Allows the user to browse a client path name.	X			
XMLOutputWriter.getDocumentContent() -> byte[] Returns the content of an XML result as bytes (using UTF-8 encoding)	X			

Changes from 7.2.4 to 9.8 SR4

New constants:

Additionally, there are new attribute/model/cxn/lane/symbol type constants in ARIS metamodel.

FMT_STRIKETHROUGH - the output objects supports "strikethrough" text format

MODEL_CXN_DISTANCE - model flag (have distance between cxn and object)

SAVE_AUTO - the new standard save mode in ARIS report.

Please read the details here:

<http://www.ariscommunity.com/users/thaase/2015-11-24-slow-reports-aris-9-how-improve-save-performance-when-modifying-data>

For new link functionality in ARIS 9 (so far used only by UML2):

LINKRULE_NONE

LINKRULE_SOURCE_DELETESTARGET

LINKRULE_SOURCE_RENAMESTARGET

LINKRULE_TARGET_DELETESSOURCE

LINKRULE_TARGET_RENAMESSOURCE

LINKTYPE_DIAGRAM_ASSIGNMENT

LINKTYPE_OMF_TAGREFERENCE

LINKTYPE_REUSE_OBJECT_LINK

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
signature change ABOCubeProxy.getLocale(DbSession) -> Locale changed return type ABOGroup.getGroup() -> ABOGroupInst ABOGroup.getSetInstance() -> ASetInstanceDTO		X		
ABOSubject.createGUIDandOID() -> void ABOSubject.createGUIDandOIDNew() -> void	X			X
removed AExcelAccessException			X	
ArisMetaModel.getAPIName(int,int) -> String (also available in Publisher) ArisMetaModel.getMetamodellItems(int,int) -> int[] (also available in Publisher) ArisMetaModel.getMetamodelName(int) -> String (also available in Publisher) ArisMetaModel.getMetamodels() -> int[] (also available in Publisher) ArisMetaModel.isUniqueCxn(int,int,int) -> int (also available in Publisher)	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
AttrDateDef.getValueGMT0() -> long (also available in Publisher) AttrDateDef.setValueGMT0(long) -> boolean AttrTimeDef.getValueGMT0() -> long AttrTimeDef.setValueGMT0(long) -> boolean AttrTimeStampDef.getValueGMT0() -> long AttrTimeStampDef.setValueGMT0(long) -> boolean	X			
AttrOcc.getOrderNum() -> int (also available in Publisher) AttrOcc.getRotation() -> short (also available in Publisher) AttrOcc.setOrderNum(short) -> boolean	X			
BOReportRoot.assignSmartinputPermission(ABOUser) -> void	X			
BPExportData.getDbName() -> String BPExportData.getPaletteGUID() -> String BPExportData.getServerName() -> String BPExportData.getTenantID() -> String BPExportData.setDbName(String) -> void BPExportData.setPaletteGUID(String) -> void BPExportData.setServerName(String) -> void BPExportData.setTenantID(String) -> void removed BPExportData.getSelectedMethodFilters() -> GUID[] removed BPExportData.getSelectedMethodFiltersAsString() -> String[] removed BPExportData.setSelectedMethodFilters(GUID[]) -> void removed BPExportData.setSelectedMethodFiltersAsStringArray(String[]) -> void removed BPExportResult.getMsgs() -> List	X			
BPLayoutInfo.getOEMProfile() -> String BPLayoutInfo.setOEMProfile(String) -> void	X			
BusinessPublisher.editExport(Database,BPExportData) -> BPExportResult BusinessPublisher.getLocaleId(Locale) -> int BusinessPublisher.getLocaleId(String) -> int BusinessPublisher.removeSpecialCharacters(String) -> String removed BusinessPublisher.uploadKey(String) -> boolean	X			
ComObjOcc.getIncomingLinks() -> Link[] ComObjOcc.getLinks() -> Link[] ComObjOcc.getOptionalBitmap() -> byte[] ComObjOcc.getOutgoingLinks() -> Link[] removed ComObjOcc.ObjectID(int) -> String (also available in Publisher)	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
ConnectableDef.getCreator() -> String				
ConnectableDef.getIncomingLinks() -> Link[]				
ConnectableDef.getLastModifier() -> String	X			
ConnectableDef.getLinks() -> Link[]				
ConnectableDef.getOutgoingLinks() -> Link[]				
ConnectableDef.getTimeOfCreation() -> ATimeStamp				
ConnectableDef.getTimeOfLastModification() -> ATimeStamp				
ConnectableDef.OID() -> int[]				X
removed ConnectableDef.CreateExtCxnDef(ConnectableDef,int) -> ExtCxnDef				
removed ConnectableDef.fromExtCxnDefs() -> ExtCxnDef[]			X	
removed ConnectableDef.toExtCxnDefs() -> ExtCxnDef[]				
ConnectableOcc.getIncomingLinks() -> Link[]	X			
ConnectableOcc.getLinks() -> Link[]				
ConnectableOcc.getOutgoingLinks() -> Link[]				
removed ConnectableOcc.ObjectID(int) -> String (also available in Publisher)				X
removed ConnectableOcc.fromExtCxnOccs() -> ExtCxnOcc[]				
removed ConnectableOcc.toExtCxnOccs() -> ExtCxnOcc[]				
ConsolidateSet.add(ObjDef,ObjDef[]) -> void	X			
This interface is used for „virtual“ connections created by an assignment:	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
CxnAssign.ActiveType() -> String (also available in Publisher) CxnAssign.AssignedModels() -> Model[] CxnAssign.AssignedModels(int) -> Model[] CxnAssign.AssignedModels(int[]) -> Model[] CxnAssign.AttrList(int) -> Attr[] (also available in Publisher) CxnAssign.AttrList(int,boolean) -> Attr[] (also available in Publisher) CxnAssign.AttrList(int,int[]) -> Attr[] (also available in Publisher) CxnAssign.AttrList(int,int[],boolean) -> Attr[] (also available in Publisher) CxnAssign.AttrMap(int) -> Map (also available in Publisher) CxnAssign.AttrMap(int,boolean) -> Map (also available in Publisher) CxnAssign.AttrMap(int,int[]) -> Map (also available in Publisher) CxnAssign.AttrMap(int,int[],boolean) -> Map (also available in Publisher) CxnAssign.Attribute(int,int) -> Attr (also available in Publisher) CxnAssign.Attribute(int,int,boolean) -> Attr (also available in Publisher) CxnAssign.CompareAttributes(Item) -> Map (also available in Publisher) CxnAssign.CompareAttributes(Item,int[]) -> Map (also available in Publisher) CxnAssign.CreateAssignment(Model) -> boolean CxnAssign.CreateAssignment(Model,boolean) -> boolean CxnAssign.Database() -> Database (also available in Publisher) CxnAssign.Delete() -> boolean CxnAssign.Delete(boolean) -> boolean CxnAssign.DeleteAssignment(Model) -> boolean CxnAssign.GUID() -> String (also available in Publisher) CxnAssign.GetReorgMark() -> int CxnAssign.AreEqual(ArisObject) -> boolean (also available in Publisher) CxnAssign.IsValid() -> boolean (also available in Publisher) CxnAssign.KindNum() -> int (also available in Publisher) CxnAssign.Name(int) -> String (also available in Publisher) CxnAssign.Name(int,boolean) -> String (also available in Publisher) CxnAssign.OID() -> int[] CxnAssign.ObjectID() -> String (also available in Publisher) CxnAssign.OccList() -> CxnOcc[] (also available in Publisher) CxnAssign.OccList(Model[]) -> CxnOcc[] (also available in Publisher) CxnAssign.PassiveType() -> String (also available in Publisher) CxnAssign.RefGUID() -> String		X		

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
CxnAssign.SetReorgMark(int) -> boolean				
CxnAssign.SourceObjDef() -> ObjDef (also available in Publisher)				
CxnAssign.TargetModel() -> Model (also available in Publisher)				
CxnAssign.TargetObjDef() -> ObjDef (also available in Publisher)				
CxnAssign.Touch() -> void				
CxnAssign.TypeNum() -> int				
CxnAssign.WriteAttributes(Map,int) -> Attr[]				
CxnAssign.getCreator() -> String				
CxnAssign.getIncomingLinks() -> Link[]	X			
CxnAssign.getLastModifier() -> String				
CxnAssign.getLinks() -> Link[]				
CxnAssign.getOutgoingLinks() -> Link[]				
CxnAssign.getReorgMark() -> int				
CxnAssign.getTimeOfCreation() -> ATimeStamp				
CxnAssign.getTimeOfLastModification() -> ATimeStamp				
CxnAssign.isImplicitCxn() -> boolean (also available in Publisher)				
CxnAssign.setReorgMark(int) -> boolean				
CxnDef.getCreator() -> String				
CxnDef.getIncomingLinks() -> Link[]				
CxnDef.getLastModifier() -> String				
CxnDef.getLinks() -> Link[]	X			
CxnDef.getOutgoingLinks() -> Link[]				
CxnDef.getTimeOfCreation() -> ATimeStamp				
CxnDef.getTimeOfLastModification() -> ATimeStamp				
removed CxnDef.CreateExtCxnDef(ConnectableDef,int) -> ExtCxnDef				
removed CxnDef.fromExtCxnDefs() -> ExtCxnDef[]		X		
removed CxnDef.toExtCxnDefs() -> ExtCxnDef[]				
CxnDef.OID() -> int[]				X
CxnLineStyle.getColor() -> Color				
CxnLineStyle.getStyle() -> int				
CxnLineStyle.getWidth() -> int				
CxnLineStyle.isDefault() -> boolean				
CxnLineStyle.setColor(Color) -> void	X			
CxnLineStyle.setColorValue(int) -> void				
CxnLineStyle.setDefault() -> void				
CxnLineStyle.setStyle(int) -> void				
CxnLineStyle.setWidth(int) -> void				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
CxnOcc.getDefinition() -> CxnDef (also available in Publisher) CxnOcc.getIncomingLinks() -> Link[] CxnOcc.getLineStyle() -> CxnLineStyle (also available in Publisher) CxnOcc.getLinks() -> Link[] CxnOcc.getOutgoingLinks() -> Link[] CxnOcc.getPoints() -> Point[] (also available in Publisher) CxnOcc.getSource() -> ObjOcc (also available in Publisher) CxnOcc.getTarget() -> ObjOcc (also available in Publisher) CxnOcc.setStyle(CxnLineStyle) -> boolean CxnOcc.setPoints(Point[]) -> boolean CxnOcc.CxnDef() -> CxnDef (also available in Publisher) CxnOcc.GetLine() -> int[] (also available in Publisher) CxnOcc.PointList() -> Point[] (also available in Publisher) CxnOcc.SetPointList(Point[]) -> boolean CxnOcc.SourceObjOcc() -> ObjOcc (also available in Publisher) CxnOcc.SetPointList(Point[]) -> boolean CxnOcc.SourceObjOcc() -> ObjOcc (also available in Publisher) removed CxnOcc.ObjectID(int) -> String (also available in Publisher) removed CxnOcc.fromExtCxnOccs() -> ExtCxnOcc[] removed CxnOcc.toExtCxnOccs() -> ExtCxnOcc[X			
removed class DMSCredentials removed class DMSFileItem removed class DMSIntegration removed class DMSLock removed class DMSLockOptions removed class DMSObject removed class DMSProvider removed class DMSResultEntry removed class DMSSearchQuery removed class DMSVersion removed class DMSVersionCreationOptions removed class DTD			X	
Database users are no longer stored in the ARIS database, but in the UserManagement (UMC). The corresponding report methods consequently manage the users in the UMC, so they still work „as expected“.	X			
The term „AssignedUser“ is used for a user having the right to (at least) view the database content. Non-assigned user do not even see the database in the explorer.				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Database.AssignedUserGroups() -> UserGroup[]				
Database.AssignedUsers() -> User[]				
Database.CreateUser(String, String, int[], boolean, int) -> User				
Database.CreateUserGroup(String, int[], int) -> UserGroup				
Database.getArisData() -> ArisData				
Database.getCreator() -> String				
Database.getDefaultFilter() -> String				
Database.getLastModifier() -> String	X			
Database.getPaletteGUID() -> String				
Database.getReturnSystemAttributes() -> boolean				
Database.getTimeOfCreation() -> ATimeStamp				
Database.getTimeOfLastModification() -> ATimeStamp				
Database.setDefaultFilter(String) -> boolean				
Database.setPaletteGUID(String) -> boolean				
Database.setReturnSystemAttributes(boolean) -> void				
Database_OID() -> int[]				X
DblInfo.getCount(int) -> long	X			
DeployResult.getMessages() -> List	X			
DeployResult.getState() -> boolean				
removed class DiagramType				X
DialogTemplate.SetProperties(String[]) -> void	X			
removed class DisplayOption				X
Visio import component API: var vImport = Context. getComponent(„VisioImport“): DrawingImport.getBPMNSupport() -> ReportBPMNSupport	X			
DrawingImport.getMapping(byte[], byte[], MethodFilter) -> Mapping				
DrawingImport.loadDrawingFile(String, byte[]) -> VisioLoader				
DrawingImport.loadDrawingFile(String, byte[], String) -> VisioLoader				
removed class EdgeSymbol				
removed class ExtCxnDef				X
removed class ExtCxnOcc				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
FontStyle.getCreator() -> String				
FontStyle.getLastModifier() -> String	X			
FontStyle.getTimeOfCreation() -> ATimeStamp				
FontStyle.getTimeOfLastModification() -> ATimeStamp				
FontStyle.OID() -> int[]				X
FontStyle.remove() -> boolean [9.8 SR4]	X			
GfxObj.get3DEffect() -> boolean (also available in Publisher)	X			
GfxObj.set3DEffect(boolean) -> boolean				
„Group“ is now derived from „ObjDef“, so it has some more members. Classic ARIS groups have TypeNum()==Constants.OT_GROUP				
Group.AssignedModels() -> Model[]				
Group.AssignedModels(int) -> Model[]				
Group.AssignedModels(int[]) -> Model[]				
Group.ChangeGroup(Group) -> boolean				
Group.Consolidate(ObjDef[]) -> boolean				
Group.Consolidate(ObjDef[],boolean) -> boolean				
Group.Consolidate(ObjDef[],boolean,boolean) -> boolean				
Group.Consolidate(ObjDef[],boolean,boolean,boolean) -> boolean				
Group.CreateAssignment(Model) -> boolean				
Group.CreateAssignment(Model,boolean) -> boolean				
Group.CreateCxnDef(ObjDef,int) -> CxnDef				
Group.CxnList() -> CxnDef[] (also available in Publisher)				
Group.CxnList(Model[]) -> CxnDef[] (also available in Publisher)	X			
Group.CxnList(int) -> CxnDef[] (also available in Publisher)				
Group.CxnList(int,Model[]) -> CxnDef[] (also available in Publisher)				
Group.CxnListFilter(int) -> CxnDef[] (also available in Publisher)				
Group.CxnListFilter(int,String,int) -> CxnDef[] (also available in Publisher)				
Group.CxnListFilter(int,String,int,int) -> CxnDef[] (also available in Publisher)				
Group.CxnListFilter(int,String,int,int,int) -> CxnDef[] (also available in Publisher)				
Group.CxnListFilter(int,int) -> CxnDef[] (also available in Publisher)				
Group.CxnListFilter(int,int[]) -> CxnDef[] (also available in Publisher)				
Group.DeleteAssignment(Model) -> boolean				
Group.GetDefaultSymbolNum() -> int (also available in Publisher)				
Group.GetReorgMark() -> int				
Group.Group() -> Group (also available in Publisher)				
Group.HasVariants() -> boolean (also available in Publisher)				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Group.Identifier(int) -> String (also available in Publisher)				
Group.IsVariant() -> boolean (also available in Publisher)				
Group.LinkVariant(ObjDef) -> boolean	X			
Group.Master() -> ObjDef (also available in Publisher)				
Group.OccList() -> ObjOcc[] (also available in Publisher)				
Group.OccList(Model[]) -> ObjOcc[] (also available in Publisher)				
Group.OccListInModel(Model) -> Occ[] (also available in Publisher)				
Group.OID() -> int[]				X
Group.SetDefaultSymbolNum(int,boolean) -> boolean				
Group.SetReorgMark(int) -> boolean				
Group.Type() -> String (also available in Publisher)				
Group.Type(boolean) -> String (also available in Publisher)				
Group.TypeNum() -> int				
Group.UnlinkVariant(ObjDef) -> boolean				
Group.Variants() -> ObjDef[] (also available in Publisher)				
Group.Variants(Group[]) -> ObjDef[] (also available in Publisher)				
Group.getConnectedObjs(int) -> ObjDef[] (also available in Publisher)				
Group.getConnectedObjs(int[]) -> ObjDef[] (also available in Publisher)				
Group.getConnectedObjs(int[],int) -> ObjDef[] (also available in Publisher)				
Group.getConnectedObjs(int[],int,int[]) -> ObjDef[] (also available in Publisher)				
Group.getCreator() -> String				
Group.getDefaultSymbolGUID() -> String (also available in Publisher)				
Group.getDefaultSymbolNum() -> int (also available in Publisher)	X			
Group.getDuration(int,Date,int) -> Date (also available in Publisher)				
Group.getEndDate(int,int,int) -> Date (also available in Publisher)				
Group.getIncomingLinks() -> Link[]				
Group.getLastModifier() -> String				
Group.getLinks() -> Link[]				
Group.getLockOwner() -> String				
Group.getNextWorkingDate(int,int) -> Date (also available in Publisher)				
Group.getOutgoingLinks() -> Link[]				
Group.getReorgMark() -> int				
Group.getSubTypeNum() -> int (also available in Publisher)				
Group.getTimeOfCreation() -> ATimeStamp				
Group.getTimeOfLastModification() -> ATimeStamp				
Group.setDefaultSymbolGUID(String,boolean) -> boolean				
Group.setDefaultSymbolNum(int,boolean) -> boolean				
Group.setReorgMark(int) -> boolean				
Group.setSubTypeNum(int) -> boolean				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Item.getCreator() -> String Item.getLastModifier() -> String Item.getTimeOfCreation() -> ATimeStamp Item.getTimeOfLastModification() -> ATimeStamp Item.OID() -> int[]	X			
Label.Database() -> Database (also available in Publisher) Label.IsValid() -> boolean (also available in Publisher) Label.getDefiningOccurrence() -> Occ Label.getFontStyleSheet() -> FontStyle Label.getHeight() -> int Label.getRotation() -> short Label.getTypeNum() -> int Label.getWidth() -> int Label.getX() -> int Label.getY() -> int	X			
Lane.getCreator() -> String Lane.getLastModifier() -> String Lane.getTimeOfCreation() -> ATimeStamp Lane.getTimeOfLastModification() -> ATimeStamp Lane.OID() -> int[]	X			
Link.Database() -> Database Link.IsValid() -> boolean Link.ObjectID() -> String Link.getLinkDataGUID() -> String Link.getLinkKind() -> int Link.getLinkRules() -> LinkRule[] Link.getLinkSource() -> ArisObject Link.getLinkTarget() -> ArisObject Link.getLinkType() -> LinkType	X			
Used by Visio import component				
Mapping.findDrawingTypeByAlias(String) -> String Mapping.getAllUsedSymbols() -> int[] Mapping.getCxnType(String, String) -> int Mapping.getDrawingTypeNameMap(String) -> HashMap Mapping.getFallbackCxnType(ObjOcc, ObjOcc, int) -> int Mapping.getModelTypeByVisioTemplate(String) -> int Mapping.getSourceType() -> String Mapping.getSymbolByNameU(String) -> int Mapping.initMapping(String) -> boolean	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Matrix.Graphic(boolean,boolean,int,boolean) -> ModelPicture (also available in Publisher)				
Matrix.ObjDefListBySymbols(int[]) -> ObjDef[] (also available in Publisher)				
Matrix.getCreator() -> String				
Matrix.getIncomingLinks() -> Link[]	X			
Matrix.getLastModifier() -> String				
Matrix.getLinks() -> Link[]				
Matrix.getLockOwner() -> String				
Matrix.getOutgoingLinks() -> Link[]				
Matrix.getTimeOfCreation() -> ATimeStamp				
Matrix.getTimeOfLastModification() -> ATimeStamp				
Matrix.OID() -> int[]	X			
removed Matrix.AddBusinessCase(Model) -> boolean				
removed Matrix.CreateExtCxnOcc(ConnectableOcc, ConnectableOcc, ExtCxnDef, Point[]) -> ExtCxnOcc			X	
removed Matrix.CreateExtCxnOcc(ConnectableOcc, ConnectableOcc, ExtCxnDef, Point[], boolean) -> ExtCxnOcc				
removed Matrix.removed Matrix.OriginalModel() -> Model				
MatrixCxnDef.getCreator() -> String				
MatrixCxnDef.getIncomingLinks() -> Link[]				
MatrixCxnDef.getLastModifier() -> String	X			
MatrixCxnDef.getLinks() -> Link[]				
MatrixCxnDef.getOutgoingLinks() -> Link[]				
MatrixCxnDef.getTimeOfCreation() -> ATimeStamp				
MatrixCxnDef.getTimeOfLastModification() -> ATimeStamp				
MatrixCxnDef.OID() -> int[]			X	
removed MatrixCxnDef.CreateExtCxnDef(ConnectableDef, int) -> ExtCxnDef				
removed MatrixCxnDef.fromExtCxnDefs() -> ExtCxnDef[]		X		
removed MatrixCxnDef.toExtCxnDefs() -> ExtCxnDef[]				
removed MergeBaseOptions			X	

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
MethodFilter.AttrGroupChildren(int,boolean) -> int[] (also available in Publisher) MethodFilter.AttrGroupChildren(int,int,int,boolean) -> int[] (also available in Publisher) MethodFilter.AttrGroupParents(int) -> int[] (also available in Publisher) MethodFilter.AttrSymbols(int) -> int[] MethodFilter.AttrTypesOfAttrGroup(int,boolean) -> int[] (also available in Publisher) MethodFilter.AttrTypesOfAttrGroup(int,int,int,boolean) -> int[] (also available in Publisher) MethodFilter.AttrValueSymbol(int,int) -> Integer MethodFilter.SymbolGraphic(int,String,boolean) -> PictureBase MethodFilter.fromAPIName(String) -> int MethodFilter.getMetamodelItems(int,int) -> int[] (also available in Publisher) MethodFilter.getMetamodelName(int) -> String (also available in Publisher) MethodFilter.getMetamodels() -> int[] (also available in Publisher) MethodFilter.getMethodLocale() -> int (also available in Publisher) MethodFilter.getMethodLocales() -> MethodLocale[] MethodFilter.isUniqueCxn(int,int,int) -> int (also available in Publisher)		X		
Model.Graphic(boolean,boolean,int,boolean) -> ModelPicture (also available in Publisher) (additional last parameter) Model.ObjDefListBySymbols(int[]) -> ObjDef[] (also available in Publisher) Model.getCreator() -> String Model.getIncomingLinks() -> Link[] Model.getLastModifier() -> String Model.getLinks() -> Link[] Model.getLockOwner() -> String Model.getOutgoingLinks() -> Link[] Model.getTimeOfCreation() -> ATimeStamp Model.getTimeOfLastModification() -> ATimeStamp Model.OID() -> int[] removed Model.AddBusinessCase(Model) -> boolean removed Model.OriginalModel() -> Model removed Model. CreateExtCxnOcc(ConnectableOcc,ConnectableOcc,ExtCxnDef,Point[]) -> ExtCxnOcc removed Model. CreateExtCxnOcc(ConnectableOcc,ConnectableOcc,ExtCxnDef,Point[],boolean) -> ExtCxnOcc	X			X
ModelGenerationOptions.hideProcessInterfacesSpecial(boolean) -> void ModelGenerationOptions.setOnlyOneSatelliteTypeInHeader(long) -> void	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
ModelPicture.getPictureTiled(int,int,String) -> PictureBase[] (also available in Publisher)	X			
ModelShortcut.getCreator() -> String				
ModelShortcut.getLastModifier() -> String	X			
ModelShortcut.getTimeOfCreation() -> ATimeStamp				
ModelShortcut.getTimeOfLastModification() -> ATimeStamp				
ModelShortcut.OID() -> int[]				X
MultiDefCxnOcc AttrOcc(int) -> AttrOcc (also available in Publisher)				
MultiDefCxnOcc AttrOccList() -> AttrOcc[] (also available in Publisher)				
MultiDefCxnOcc Database() -> Database (also available in Publisher)				
MultiDefCxnOcc isEqual(ArisObject) -> boolean (also available in Publisher)				
MultiDefCxnOcc IsValid() -> boolean (also available in Publisher)				
MultiDefCxnOcc KindNum() -> int (also available in Publisher)				
MultiDefCxnOcc Model() -> Model (also available in Publisher)				
MultiDefCxnOcc ObjectID() -> String (also available in Publisher)				
MultiDefCxnOcc Remove() -> boolean				
MultiDefCxnOcc Remove(boolean) -> boolean				
MultiDefCxnOcc GetActive() -> boolean				
MultiDefCxnOcc GetDefinition() -> ConnectableDef				
MultiDefCxnOcc GetFontStyleSheet() -> FontStyle				
MultiDefCxnOcc GetIncomingLinks() -> Link[]	X			
MultiDefCxnOcc GetLabels() -> Label[]				
MultiDefCxnOcc GetLineStyle() -> CxnLineStyle				
MultiDefCxnOcc GetLinks() -> Link[]				
MultiDefCxnOcc GetMultiDefCxnOccs(boolean,boolean) -> MultiDefCxnOcc[]				
MultiDefCxnOcc GetOutgoingLinks() -> Link[]				
MultiDefCxnOcc GetParticipants() -> ConnectableDef[]				
MultiDefCxnOcc GetPoints() -> Point[]				
MultiDefCxnOcc GetSource() -> Occ				
MultiDefCxnOcc GetSymbolNum() -> int				
MultiDefCxnOcc GetTarget() -> Occ				
MultiDefCxnOcc GetZOrder() -> int (also available in Publisher)				
MultiDefCxnOcc setActive(boolean) -> boolean				
MultiDefCxnOcc setZOrder(int) -> boolean				
removed class NodeSymbol				X

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
ObjDef.getCreator() -> String				
ObjDef.getIncomingLinks() -> Link[]				
ObjDef.getLastModifier() -> String				
ObjDef.getLinks() -> Link[]	X			
ObjDef.getLockOwner() -> String				
ObjDef.getOutgoingLinks() -> Link[]				
ObjDef.getTimeOfCreation() -> ATimeStamp				
ObjDef.getTimeOfLastModification() -> ATimeStamp				
changed result type ObjDef.Shortcuts() -> Item[]		X		
ObjDef.OID() -> int[]				X
removed ObjDef.CreateExtCxnDef(ConnectableDef,int) -> ExtCxnDef				
removed ObjDef.fromExtCxnDefs() -> ExtCxnDef[]			X	
removed ObjDef.toExtCxnDefs() -> ExtCxnDef[]				
ObjDefShortcut.getCreator() -> String				
ObjDefShortcut.getLastModifier() -> String	X			
ObjDefShortcut.getTimeOfCreation() -> ATimeStamp				
ObjDefShortcut.getTimeOfLastModification() -> ATimeStamp				
ObjDefShortcut.OID() -> int[]				X
ObjOcc.getEmbeddedObjOccs(int[]) -> ObjOcc[]				
ObjOcc.getIncomingLinks() -> Link[]				
ObjOcc.getLabels() -> Label[]				
ObjOcc.getLinks() -> Link[]	X			
ObjOcc.getMultiDefCxnOccs(boolean,boolean) -> MultiDefCxnOcc[]				
ObjOcc.getOutgoingLinks() -> Link[]				
removed ObjOcc.AddBusinessOcc(ObjOcc) -> boolean				
removed ObjOcc.BusinessOccs() -> ObjOcc[]				
removed ObjOcc.ObjectID(int) -> String (also available in Publisher)			X	
removed ObjOcc.OriginalOcc() -> ObjOcc				
removed ObjOcc.fromExtCxnOccs() -> ExtCxnOcc[]				
removed ObjOcc.toExtCxnOccs() -> ExtCxnOcc[]				
removed exception ObjectException			X	

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Occ.getIncomingLinks() -> Link[] Occ.getLinks() -> Link[] Occ.getOutgoingLinks() -> Link[] removed Occ.ObjectID(int) -> String (also available in Publisher)	X			
removed OutputObjectException			X	
PCA_DATA.assignSmartinputPermission(ABOUser) -> void changed signature PCA_DATA. createSystemUser(String, String, String, AUserGroupDTO) -> ABOUser changed signature PCA_DATA. createUser(String, String, int, String, AUserGroupDTO) -> ABOUser	X		X	
Picture.Insert(Picture, int, int) -> boolean Picture.getImageData(String) -> byte[] Picture.Save(String) -> boolean	X			X
Polygon.get3DEffect() -> boolean (also available in Publisher) Polygon.set3DEffect(boolean) -> boolean	X			
Process.deployOrgchart(Database, String) -> DeployResult	X			
Part of Visio import API:				
ReportBPMNSupport.getBPMNModelTypes() -> int[] ReportBPMNSupport.isBPMNModelType(int) -> boolean ReportBPMNSupport.postProcessBPMN(Model, boolean, boolean) -> boolean	X			
removed exception ReportExecutionException removed exception ReportObjectException	X			
ReportScheduler.deleteSchedules(ArisObject, String[]) -> boolean ReportScheduler.getSchedules(ArisObject) -> String[] ReportScheduler.getSchedulesForDatabaseUser(Database, boolean) -> String[] ReportScheduler.setScheduleActivation(Database, String[], boolean) -> void	X			
RoundedRectangle.get3DEffect() -> boolean (also available in Publisher) RoundedRectangle.set3DEffect(boolean) -> boolean	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
RunResult.getMessage() -> List	X			
ScriptAdmin report API: ScriptAdmin.createCategory(int,int,String) -> String ScriptAdmin.deleteCategory(int,String) -> boolean ScriptAdmin.deleteScript(int,String) -> boolean ScriptAdmin.exportFile(int,String,String) -> ZipEntry ScriptAdmin.exportScript(int,String,String[]) -> byte[] ScriptAdmin.getCategories(int,int) -> ScriptCategoryRI[] ScriptAdmin.getCategoryNames(int,String) -> Map ScriptAdmin.getScriptComponents() -> ScriptComponentInfoRI[] ScriptAdmin.getScriptInfos(int,String,int) -> ScriptInfoRI[] ScriptAdmin.importFile(int,String,String,byte[]) -> String ScriptAdmin.importScript(int,String,byte[],String[]) -> String ScriptAdmin.renameCategory(int,String,int,String) -> boolean ScriptAdmin.unzip(byte[]) -> byte[] ScriptAdmin.zip(byte[]) -> byte[] ScriptCategory.getCategoryID() -> String ScriptCategory.getComponentID() -> int ScriptCategory.getName() -> String ScriptComponentInfo.getComponentID() -> int ScriptComponentInfo.getComponentName() -> String ScriptInfo.getDescription() -> String ScriptInfo.getID() -> String ScriptInfo.getImports() -> String[] ScriptInfo.getName() -> String ScriptInfo.isSimpleFile() -> boolean	X			
ServerAdmin.backupDatabase(Database) -> byte[] ServerAdmin.backupDatabase(Database,File) -> boolean ServerAdmin.countDbItems(Database,int[]) -> DblInfo !!!last parameter was removed!!! ServerAdmin. createArisDatabase(String,boolean) -> boolean ServerAdmin.reorganiseArisDatabase(Database,String) -> int ServerAdmin.reorganiseArisDatabase(Database,String,Collection) -> int ServerAdmin.restoreDatabase(File,String) -> boolean ServerAdmin.restoreDatabase(byte[],String) -> boolean	X	X		
removed class Symbol				X

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
TextDef.getCreator() -> String				
TextDef.getLastModifier() -> String	X			
TextDef.getTimeOfCreation() -> ATimeStamp				
TextDef.getTimeOfLastModification() -> ATimeStamp				
TextDef.OID() -> int[]				X
TextOcc.getIncomingLinks() -> Link[]				
TextOcc.getLinks() -> Link[]	X			
TextOcc.getOutgoingLinks() -> Link[]				
changed result type TextOcc.setDisplayAsPostIt(boolean) -> boolean		X		
removed TextOcc.ObjectID(int) -> String (also available in Publisher)			X	
UML2 scripting:				
Omf*				
OmfScripting*	X			
Uml2Scripting*				
UML 1.x scripting				
removed class UmlEdgePresentation				
removed class UmlNodePresentation				
removed class UmlPresentation				X
removed class UmlReport				
removed class UmlScripting				
removed class UmlScriptingException				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
UMC report component interface:				
UMC.getAllLicenses() -> List				
UMC.getAllPrivileges(boolean,boolean) -> List				
UMC.getAllUsergroups() -> List				
UMC.getAllUsers() -> List				
UMC.getAssignedUsergroupsForUser(UmcUser) -> List				
UMC.getAssignedUsergroupsForUserName(String) -> List				
UMC.getAssignedUsersForUsergroup(UmcUsergroup) -> List				
UMC.getAssignedUsersForUsergroupName(String) -> List				
UMC.getCurrentUser() -> UserWrapper				
UMC.getPrivilegesForUser(UmcUser,boolean,boolean,boolean) -> List				
UMC.getPrivilegesForUserName(String,boolean,boolean,boolean) -> List				
UMC.getPrivilegesForUsergroup(UmcUsergroup,boolean,boolean) -> List				
UMC.getPrivilegesForUsergroupName(String,boolean,boolean) -> List				
UMC.getSessionsForUser(UmcUser) -> List				
UMC.getSessionsForUserName(String) -> List				
UMC.getUserById(String) -> UserWrapper				
UMC.getUserByName(String) -> UserWrapper				
UMC.getUsergroupById(String) -> UsergroupWrapper				
UMC.getUsergroupByName(String) -> UsergroupWrapper				
UMC.getUsergroupsForPrivilegeQualifier(String) -> List				
UMC.getUsersForPrivilegeQualifier(String) -> List				
UmcLicense.compareTo(Object) -> int				
UmcLicense.getConsumedSeats() -> long				
UmcLicense.getExpirationDate() -> String				
UmcLicense.getFreeSeats() -> long				
UmcLicense.getName() -> String			X	
UmcLicense.getPrivilege() -> PrivilegeWrapper				
UmcLicense.getProduct() -> ProductWrapper				
UmcLicense.getQuantity() -> long				
UmcLicense.getType() -> String				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
UmcPrivilege.compareTo(Object) -> int UmcPrivilege.getDisplayName() -> String UmcPrivilege.getId() -> String UmcPrivilege.getName() -> String UmcPrivilege.isLicensePrivilege() -> boolean	X			
UmcProduct.getCode() -> String UmcProduct.getName() -> String UmcProduct.getParent() -> ProductWrapper	X			
UmcSession.getCreated() -> String	X			
UmcUser.compareTo(Object) -> int UmcUser.getAttributes() -> Map UmcUser.getCreated() -> String UmcUser.getDescription() -> String UmcUser.getEmail() -> String UmcUser.getFirstName() -> String UmcUser.getId() -> String UmcUser.getLDAPDN() -> String UmcUser.getLastName() -> String UmcUser.getName() -> String UmcUser.getPhone() -> String UmcUser.isLDAP() -> boolean	X			
UmcUsergroup.compareTo(Object) -> int UmcUsergroup.getAttributes() -> Map UmcUsergroup.getCreated() -> String UmcUsergroup.getDescription() -> String UmcUsergroup.getId() -> String UmcUsergroup.getLDAPDN() -> String UmcUsergroup.getName() -> String UmcUsergroup.isLDAP() -> boolean	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
The standard report „User“ object: User.IsAssigned() -> boolean User.getCreator() -> String User.getCustomAttribute(String) -> String User.getCustomAttributes() -> Map User.getLastModifier() -> String User.getTimeOfCreation() -> ATimeStamp User.getTimeOfLastModification() -> ATimeStamp User.setCustomAttribute(String, String) -> boolean User.OID() -> int[]	X			X
The standard report „UserGroup“ object: UserGroup.IsAssigned() -> boolean UserGroup.getCreator() -> String UserGroup.getCustomAttribute(String) -> String UserGroup.getCustomAttributes() -> Map UserGroup.getLastModifier() -> String UserGroup.getTimeOfCreation() -> ATimeStamp UserGroup.getTimeOfLastModification() -> ATimeStamp UserGroup.setCustomAttribute(String, String) -> boolean UserGroup.OID() -> int[]	X			X

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
Part of visio import API				
VAnnotation.toString() -> String				
VConnect.getFromCell() -> String				
VConnect.getFromPart() -> String				
VConnect.getFromSheet() -> String				
VConnect.getToCell() -> String				
VConnect.getToPart() -> String				
VConnect.getToSheet() -> String				
VConnect.toString() -> String				
VGeometry.getElement() -> Element				
VGeometry.getEllipse() -> List				
VGeometry.getLineTo() -> List				
VGeometry.getMoveTo() -> List				
VGeometry.getNamespace() -> Namespace				
VGeometry.toString() -> String				
VIS_Master.addShapeOfMaster(String, String, String, int) -> void	X			
VIS_Master.addShapesOfMaster(List) -> void				
VIS_Master.getAllShapesOfMaster() -> HashMap				
VIS_Master.getMasterID() -> String				
VIS_Master.getMasterNameU() -> String				
VIS_Master.getMasterReadableName() -> String				
VIS_Master.getMasterSymbolNum() -> int				
VIS_Master.getMasterUniqueId() -> String				
VIS_Master.getShapeNameUOfMasterByShapeID(String) -> String				
VIS_Master.getShapeSymbolNumOfMasterShapeByShapeID(String) -> int				
VIS_Master.isIsHidden() -> boolean				
VIS_Master.toString() -> String				
VIS_MasterShape.getID() -> String				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
<p>VIS_MasterShape.getName() -> String</p> <p>VIS_MasterShape.getNameU() -> String</p> <p>VIS_MasterShape.getSymbolNum() -> int</p> <p>VIS_MasterShape.toString() -> String</p> <p>VIS_PointOfReference.applyScale(double) -> double</p> <p>VIS_PointOfReference.applyScale(double, String) -> double</p> <p>VIS_PointOfReference.copy() -> VIS_PointOfReference</p> <p>VIS_PointOfReference.getArisPosition(VisioLoader, VShape) -> Point</p> <p>VIS_PointOfReference.getLinePoint(Point2D\$Double) -> Point</p> <p>VIS_PointOfReference.initPointRef(VisioLoader, VShape, boolean) -> void</p> <p>VIS_PointOfReference.toString() -> String</p> <p>VName.getName() -> String</p> <p>VName.getNameU() -> String</p> <p>VName.toString() -> String</p> <p>VPage.getName() -> String</p> <p>VPage.getNameU() -> String</p> <p>VPage.getPageElement() -> Element</p> <p>VPage.name() -> String</p> <p>VPage.toString() -> String</p> <p>VShape.getID() -> String</p> <p>VShape.getMaster() -> String</p> <p>VShape.getNameU() -> String</p> <p>VShape.getShapeElement() -> Element</p> <p>VShape.getText() -> String</p> <p>VShape.getType() -> String</p> <p>VShape.name() -> String</p> <p>VShape.toString() -> String</p> <p>VShapeSize.toString() -> String</p> <p>VisioLoader.createNewVisPointOfReference(VPage) -> VIS_PointOfReference</p> <p>VisioLoader.destroy() -> void</p> <p>VisioLoader.getAlignH(VShape) -> int</p> <p>VisioLoader.getAlignV(VShape) -> int</p> <p>VisioLoader.getChildShapes(VPage) -> VShape[]</p> <p>VisioLoader.getChildShapes(VShape) -> VShape[]</p> <p>VisioLoader.getChildrenRecursive(VPage, String) -> Map</p> <p>VisioLoader.getColor(String) -> Integer</p> <p>VisioLoader.getConnects(VPage) -> VConnect[]</p> <p>VisioLoader.getFileName() -> String</p> <p>VisioLoader.getHeight(VShape) -> double</p> <p>VisioLoader.getHyperlink(VShape) -> String</p>	X			

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
VisioLoader.getLinePoints(VShape,VIS_PointOfReference) -> Point[]				
VisioLoader.getMasterMapping(Mapping) -> Map				
VisioLoader.getMasterShapeRootShapes(String) -> VShape[]				
VisioLoader.getPageAnnotations(VPage) -> VAnnotation[]				
VisioLoader.getPageHeight(VPage) -> String				
VisioLoader.getPageNames() -> VName[]				
VisioLoader.getPageShapes(VPage) -> VShape[]				
VisioLoader.getPages() -> VPage[]				
VisioLoader.getPositionLocPin(VShape) -> Point2D\$Double				
VisioLoader.getPositionPin(VShape) -> Point2D\$Double				
VisioLoader.getReviewers() -> HashMap				
VisioLoader.getShapeFillBkgnd(VShape) -> String				
VisioLoader.getShapeFillForeground(VShape) -> String				
VisioLoader.getShapeFillPattern(VShape) -> String				
VisioLoader.getShapeGeometry(VShape) -> VGeometry				
VisioLoader.getShapeLineColor(VShape) -> String				
VisioLoader.getShapeLinePattern(VShape) -> String				
VisioLoader.getShapeLineRounding(VShape) -> String				
VisioLoader.getShapeProperties(VShape) -> HashMap				
VisioLoader.getShapeProperty(VShape,String) -> String				
VisioLoader.getShapeSize(VShape) -> VShapeSize				
VisioLoader.getUsedTemplate() -> String				
VisioLoader.isShapeFreeFormText(VShape) -> boolean				
VisioLoader.setUsedTemplate(String) -> void			X	
Versioning.archiveItems(ArisObject[],String,VersioningOptions,boolean) -> int			X	
removed XMLExport.createDefaultXMLExportRootOptions(Group,int[]) -> XMLExportOptionsWrapper			X	
XlsSheet.setPageSize(MediaSizeFormat) -> void	X			
ZipEntry.getData() -> byte[]	X			
ZipEntry.getName() -> String				
ArisData.GetDatabaseNames(String) -> String[]				
ArisData.getTenantName() -> String				
ArisData.openDatabase(String,String,int) -> Database				
ArisData.openDatabase(String,String,int,int) -> Database				
ArisData.openDatabaseVersion(String,String,int,int) -> Database				
ArisData.openDatabaseVersion(String,String,int,int,int,boolean) -> Database				

New / removed / deprecated / changed methods:	New	Changed	Removed	Deprecated
ArisData.createConfigurationFilter(String,int,String,String,boolean) -> ConfigurationFilterAccess				X

Context.deleteFile(String,int) -> boolean. Deletes a „file“ controlled by the report environment.	X			
removed Context.getTempPath() -> String (also available in Publisher)			X	

Useful report hints

1. Use Context.setProperty("model-as-emf", true) once (before writing model graphics to the report)

- Makes PDF model graphics more brilliant
- maximum scalability
- smaller PDF files
- drawback: up to 10x time to create the image (due to a bug in an external library that will hopefully be fixed soon)

2. Open other databases using ArisData.openDatabase()

- you can log into the same DB as another user or with another filter
- do not forget to close them afterwards!

3. Save memory by using Database.clearCaches()

- use it where it makes sense (after using many objects that are not needed any more afterwards)

4. Clean up after an error! especially

- after openDatabase commands
- handle output file content in case of an error

5. Always use try / catch for error handling. You can report detailed error logs to the user using this code:

```
try {
    your code which might throw exceptions
}
catch(ex) {
    var line = ex.lineNumber
    var message = ex.message
    var filename = ex.fileName
    var exJava = ex.javaException
    if(exJava!=null)      {
        var aStackTrace = exJava.getStackTrace()
        for(var iST=0; iST<aStackTrace.length; iST++)  {
            message = message + "\n" + aStackTrace[iST].toString()
        }
    }
    Dialogs MsgBox("Exception in file "+filename+", line "+line+":\n"+message )
}
```

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