

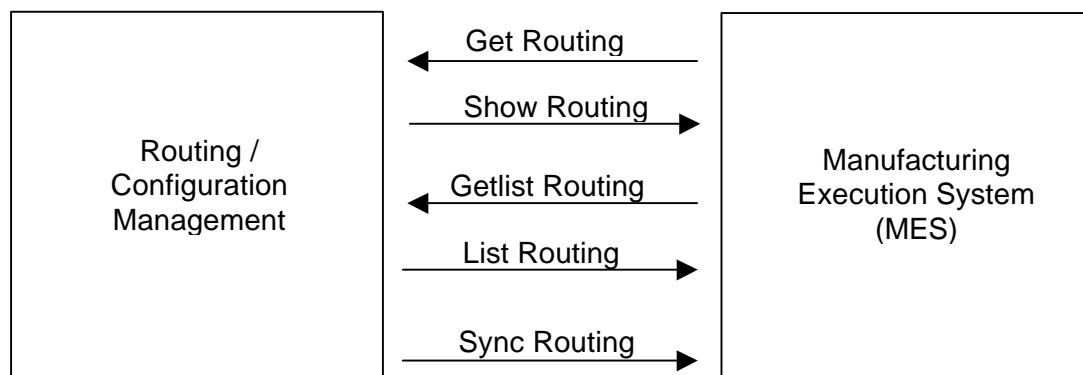
96. GETLIST ROUTING - REVISION 002

96.0 Overview

This chapter describes the Business Service Request named GETLIST ROUTING, the Verb being GETLIST and the Noun being ROUTING. ROUTING is the process an order must take in order to produce the finished good. The environment for this BSR can be within the enterprise or outside the enterprise.

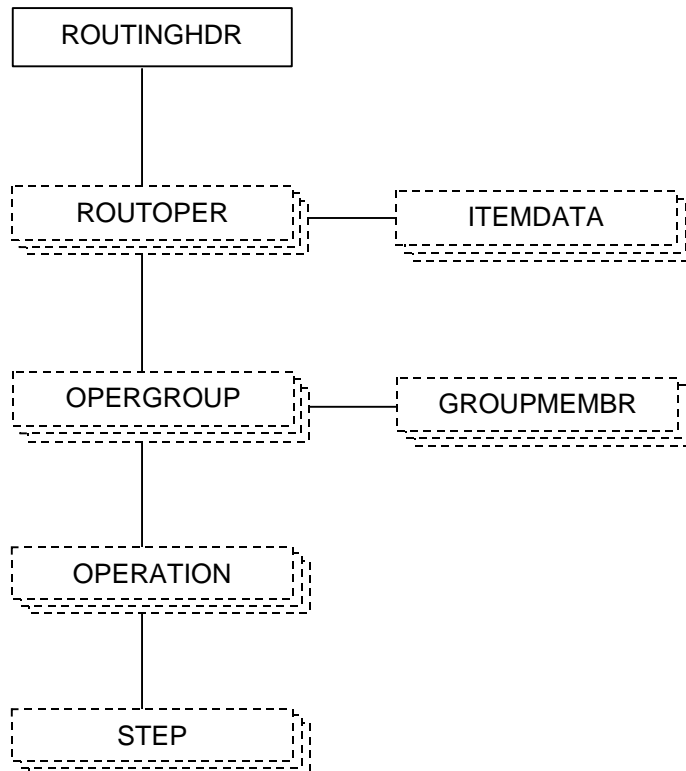
The purpose of the GETLIST ROUTING Business Service Request is to communicate to a business application component or module a request for a summary list of a ROUTING structure or structures to be returned in a LIST ROUTING BSR.

This BSR may be used individually, or as part of a larger interface scenario. The picture below visualizes one of the possible uses of this BSR. This scenario shows a GETLIST ROUTING to request a list of possible ROUTINGs to be sent via a LIST ROUTING between a Routing / Configuration Management system and a Manufacturing Execution System. This same scenario could exist between a Routing / Configuration Management system and a Finite Scheduling system.



96.1 GETLIST ROUTING

The GETLIST ROUTING Business Object Document will be processed asynchronously and consists of the following components:



The Business Service Request GETLIST ROUTING uses the following Data Types:

1. **ROUTINGHDR** - Information that generally describes the routing. This Data Type is optional.
2. **ROUTOPER** – Information specifying the operations and there order for the specified routing. This Data Type is optional.
3. **ITEMDATA** - Information that describes the attributes of a specific item. This Data Type is optional.
4. **OPERGROUP** – Information specifying a grouping of operations and their relationships. This Data Type is optional.
5. **GROUPMEMBR** – Information specifying the occurrence of the operations within an OPERGROUP. This Data Type is optional.

6. **OPERATION** - Information that describes the operation to be performed. This Data type is optional.
7. **STEP** – Information specific to the steps specified to perform the operation. This Data Type is optional.

Processing Notes:

When included in a hierarchy, the Data Types are position dependent for their meaning and applicability to the Routing.

Processing Notes:

Many of the Data Types and Field Identifiers contained in this BSR may be used to select required information. This is done by requesting specific Field Identifiers or by requesting an entire Data Type.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD. This will signify to the responding application that all of the data that corresponds to that Data Type are to be included in the response.

The Field Identifiers within each Data Type are included in this chapter to clarify what can be expected to be returned or as options for selecting information.

Under some circumstances, the hierarchy of Data Types may be bypassed in this BSR.

96.2 ROUTINGHDR

The Data Type, “**ROUTINGHDR**”, is the first Data Type the Business Service Request “**GETLIST ROUTING**” uses. This Data Type is optional.

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

Listed are all the Field Identifiers and Segments that are valid for use within the ROUTINGHDR Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the ROUTINGHDR.

OPTIONAL ROUTINGHDR DATA	
NAME	APPENDIX
BOMID	C
BOMREVISION	C
DATETIME(EFFECTIVE)	D
DESCRIPTN	C
ITEM	C
ITEMRV	C
ITEMVAR	C
MAXITEMS	C
ROUTINGID	C
ROUTINGREV	C
ROUTETYPE	C
ROUTEVAR	C
SITELEVEL1 – SITELEVEL9	C
USERAREA	C

Processing Note:

This BOD enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the "FROM" selection and the second, or duplicate Field Identifier is the "TO" in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Even if you do not want to select by the ROUTINGHDR Data Type, but require the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.

96.3 ROUTOPER

The Data Type “**ROUTOPER**” describes the series of operations that create the ROUTING. This Data Type is optional.

Listed are all the Field Identifiers and Segments that are valid for use within the ROUTOPER Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the ROUTOPER Data Type.

OPTIONAL ROUTOPER DATA	
NAME	APPENDIX
CONTAINRID	C
CONTNRTYPE	C
OPRGRPNAME	C
INQUEUEID	C
NOTES	C
OPERATNID	C
OPERATNSEQ	C
QUANTITY(MULTIPLIER)	D
TERMFLAG	C
USERAREA	C

Processing Note:

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD.

This will signify to the responding application that all of the data that corresponds to that Data Type is to be included in the response.

This BOD also enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the "FROM" selection and the second, or duplicate Field Identifier is the "TO" in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Remember that if you want to use the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.

96.4 ITEMDATA

The Data Type "**ITEMDATA**" describes a particular ITEM within a Routing structure. This Data Type is optional.

Listed are all the Field Identifiers and Segments that are valid for use within the ITEMDATA Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the ITEMDATA Data Type.

OPTIONAL ITEMDATA DATA	
NAME	APPENDIX
CONSUMPTN	C
DATETIME(EFFECTIVE)	D
DATETIME(EXECFINISH)	D
DATETIME(EXECSTART)	D
DESCRIPTN	C
FIXDQTYIND	C
ITEM	C
ITEMRV	C
ITEMTYPE	C

OPTIONAL ITEM DATA DATA	
NAME	APPENDIX
LOTLEVEL1 - LOTLEVEL2	C
NOTES	C
OPERATNID	C
OPERATNSEQ	C
PROPERTY1 – PROPERTY99	C
QUANTITY(ITEM)	D
QUANTITY(LDTMOFFSET)	D
QUANTITY(LOTSIZEMAX)	D
QUANTITY(LOTSIZEMIN)	D
QUANTITY(LOTSIZEMLT)	D
QUANTITY(PERCENTREQ)	D
REPRTGFLAG	C
SCRAP	C
SERIALNUM	C
TRAKNGFLAG	C
USERAREA	C

Processing Note:

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD.

This will signify to the responding application that all of the data that corresponds to that Data Type are to be included in the response.

This BOD also enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the "FROM" selection and the second, or duplicate Field Identifier is the "TO" in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Remember that if you want to use the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.

96.5 OPERGROUP

The Data Type “**OPERGROUP**” describes a grouping of operations for the routing as well as a sequencing of operations. It also defines the relationships between operations. This Data Type is optional.

Listed are all the Field Identifiers and Segments that are valid for use within the OPERGROUP Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the OPERGROUP Data Type.

OPTIONAL OPERGROUP DATA	
NAME	APPENDIX
OPRGRPNAME	C
OPRGRPTYPE	C
USERAREA	C

Processing Note:

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD.

This will signify to the responding application that all of the data that corresponds to that Data Type are to be included in the response.

This BOD also enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the “FROM” selection and the second, or duplicate Field Identifier is the “TO” in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Remember that if you want to use the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.

96.6 GROUPEMEMBR

The Data Type "GROUPEMEMBR" describes an operation instance that makes up the OPERGROUP. This Data Type is optional.

Listed are all the Field Identifiers and Segments that are valid for use within the GROUPEMEMBR Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the GROUPEMEMBR Data Type.

OPTIONAL GROUPEMEMBR DATA	
NAME	APPENDIX
OPERATNID	C
OPERATNSEQ	C
USERAREA	C

Processing Note:

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD.

This will signify to the responding application that all of the data that corresponds to that Data Type are to be included in the response.

This BOD also enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the "FROM" selection and the second, or duplicate Field Identifier is the "TO" in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Remember that if you want to use the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.

96.7 OPERATION

The Data Type "**OPERATION**" describes a particular OPERATION necessary for the routing. This Data Type is optional.

Listed are all the Field Identifiers and Segments that are valid for use within the OPERATION Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the OPERATION Data Type.

OPTIONAL OPERATION DATA	
NAME	APPENDIX
CONTNRTYPE	C
COSTTYPE	C
DEPARTMENT	C
DESCRIPTN	C
MACHSUDEP	C
NOTES	C
OPERAMT(COST)(F)	D
OPERATNID	C
OPERATTYPE	C

OPTIONAL OPERATION DATA	
NAME	APPENDIX
PROCESSCODE	C
QUANTITY(BATCHSIZE)	D
QUANTITY(BATCHTIME)	D
QUANTITY(FIXEDTIME)	D
QUANTITY(MAXPARLTM)	D
QUANTITY(MOVETIME)	D
QUANTITY(PERSHBNOPR)	D
QUANTITY(PERSHWIOPR)	D
QUANTITY(QUEUE TIME)	D
QUANTITY(REJECTED)	D
QUANTITY(REJPERCENT)	D
QUANTITY(RUNTIME)	D
QUANTITY(SETUPTIME)	D
QUANTITY(TEARDOWN)	D
QUANTITY(TRANSFRLOT)	D
QUANTITY(WAITTIME)	D
SAVESETUP	C
SITELEVEL1 – SITELEVEL9	C
TRAKNGFLAG	C
USERAREA	C

Processing Note:

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD.

This will signify to the responding application that all of the data that corresponds to that Data Type are to be included in the response.

This BOD also enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the “FROM” selection and the second, or duplicate Field Identifier is the “TO” in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Remember that if you want to use the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.

96.8 STEP

The Data Type "STEP" describes the STEP within an OPERATION for a specific ROUTING. This Data Type is optional.

Listed are all the Field Identifiers and Segments that are valid for use within the STEP Data Type. The first column of the table indicates the name. Segment names also include the Qualifier in parenthesis.

The second column indicates in which OAGIS Appendix the data is described, basically if the data is a Field Identifier or a Segment. Details of the Field Identifiers can be located in Appendix C, and details of the Segments can be located in Appendix D.

There are no required fields for the STEP Data Type.

OPTIONAL STEP DATA	
NAME	APPENDIX
DEPARTMENT	C
SITELEVEL1 – SITELEVEL9	C
STEPID	C
STEPNUM	C
STEPTYPE	C
USERAREA	C

Processing Note:

The fields in this Data Type are used either for selecting the data required or as an example of what data may be returned in the LIST ROUTING response.

If the Data Type is not using Field Identifiers to select information, but the data within a Data Type is requested to be returned, the Data Type is coded without any Field Identifiers and with zero occurrences in the meta data part of the BOD.

This will signify to the responding application that all of the data that corresponds to that Data Type are to be included in the response.

This BOD also enables range selections. This is accomplished by including two separate occurrences of a Field Identifier. The first occurrence is the "FROM" selection and the second, or duplicate Field Identifier is the "TO" in the range to be selected.

If a second Field Identifier is not included, the selection will continue until the data no longer applies to the selection or the MAXITEMS is reached.

In all cases where range selections are used, the solution set to be returned will include through the "TO" field. This is sometimes known as an "inclusive" range selection.

Remember that if you want to use the MAXITEMS capability, the ROUTINGHDR is required to be sent to accomplish this.