RUN & ATTACH A REPORT TO AN EMAIL IN MAXIMO WORKFLOW

Learn how to create an automation script to attach a Work Order detail report to an email communication when a WO is approved

Presented by Stephen Hume, MaxTECH Chair

Agenda

1. Background
2. Steps to Implement the Maximo workflow
3. Contact MaxTECH

Stephen Hume

Stephen has been working with IBM Maximo for over ten years in a variety of industries (Oil and Gas, Utilities). He has taught Maximo courses to end users for both Technical and Functional audiences and chairs the MaxTECH User Group.

Background

During a recent project, I had a requirement to attach a copy of the Work Order detail report to an email communication when the Work Order was approved. This, of course, could have been done manually by the user. First running the BIRT report, then saving a copy of the report in PDF format and attaching it to the Work Order for future use.

The next manual step would be for the user to workflow the Work Order, and select the option which sets the status to APPR (Approved).

Finally, they would create a communication from the Work Order, choose an appropriate communication template and then manually attach the report PDF which they had earlier saved.

This long winded process is why the business wanted this process automated, so they made the request to have it done!

The Solution

An automation script was written that would run the report for a specific work order, save the report as a PDF file and attach a copy of the PDF to the Work Order through doclinks.

A new attachment folder was created which would store the report PDF for automatic attachment to the communication (this folder was called ReportPDF).

The new communication template was created which would automatically attach any files found in the ReportPDF folder.

The Work Order application was edited in Notepad++ to add a new dialog for the create communication. This allowed the selection of the communication template as a default.

This was first tested by adding a pushbutton to the application which would run the action associated with the automation script.

After successful testing, the action was added to the Work Order workflow.

```
#--------------------------------------------------------------------------------
#
# Script: WOATTTC001
#
# Launch Point: WORKORDER - Action
#
# Generate a BIRT report and save it as an attachment.
#
#--------------------------------------------------------------------------------

from psdi.mbo import Mbo, MboConstants
from psdi.server import MXServer

from com.ibm.tivoli.maximo.report.birt.admin   import ReportAdminServiceRemote
from com.ibm.tivoli.maximo.report.birt.runtime import ReportParameterData

from java.io import FileOutputStream

#--------------------------------------------------------------------------------

reportName = “xxxx_wo.rptdesign"    # name of the report to be lauched
appName = "WOCONV"                  # application
reportFolder = "ReportPDF"          # folder where the report will be stored

#--------------------------------------------------------------------------------

service.log("Entering CNRWOCONV001")

wonum = mbo.getString("WONUM")

service.log("Retrieving destination file and folder")

doctypesMboSet = MXServer.getMXServer().getMboSet('DOCTYPES', mbo.getUserInfo())
doctypesMboSet.setWhere("DOCTYPE='" + reportFolder + "'")

outputFilePath=doctypesMboSet.getMbo(0).getString('DEFAULTFILEPATH')

service.log("Output folder: " + outputFilePath)

outputFileName = wonum + "-details.pdf"
outputFile = outputFilePath + "/" + outputFileName

service.log("Output file: " + outputFile)
service.log("Generating report" + reportName)

# get the handler to BIRT report engine
reportAdminService = MXServer.getMXServer().lookup("BIRTREPORT")

# pass WONUM as report parameter
parameterData = ReportParameterData()
#parameterData.addParameter("WORKORDER.wonum", wonum)
parameterData.addParameter("where", "(WORKORDER.wonum = '" + wonum + "')")

reportBytes = reportAdminService.runReport(MXServer.getMXServer().getSystemUserInfo(), reportName, appName, parameterData, outputFileName,
                                           ReportAdminServiceRemote.OUTPUT_FORMAT_PDF)

# writes the binary data to the output file
fos = FileOutputStream(outputFile)
fos.write(reportBytes)
fos.close()

service.log("Creating DOCLINKS record")

doclinksMboSet = mbo.getMboSet("DOCLINKS")

doclinksMbo = doclinksMboSet.add()

doclinksMbo.setValue("URLTYPE", "FILE")
doclinksMbo.setValue("URLNAME", outputFile)
doclinksMbo.setValue("NEWURLNAME", outputFile)
doclinksMbo.setValue("DOCTYPE", reportFolder)
doclinksMbo.setValue("ADDINFO", True)
doclinksMbo.setValue("DESCRIPTION", outputFileName)
```

THE AUTOMATION SCRIPT

WOATTC001 – NOTE this should match the action name that is created and be named according to your naming standards

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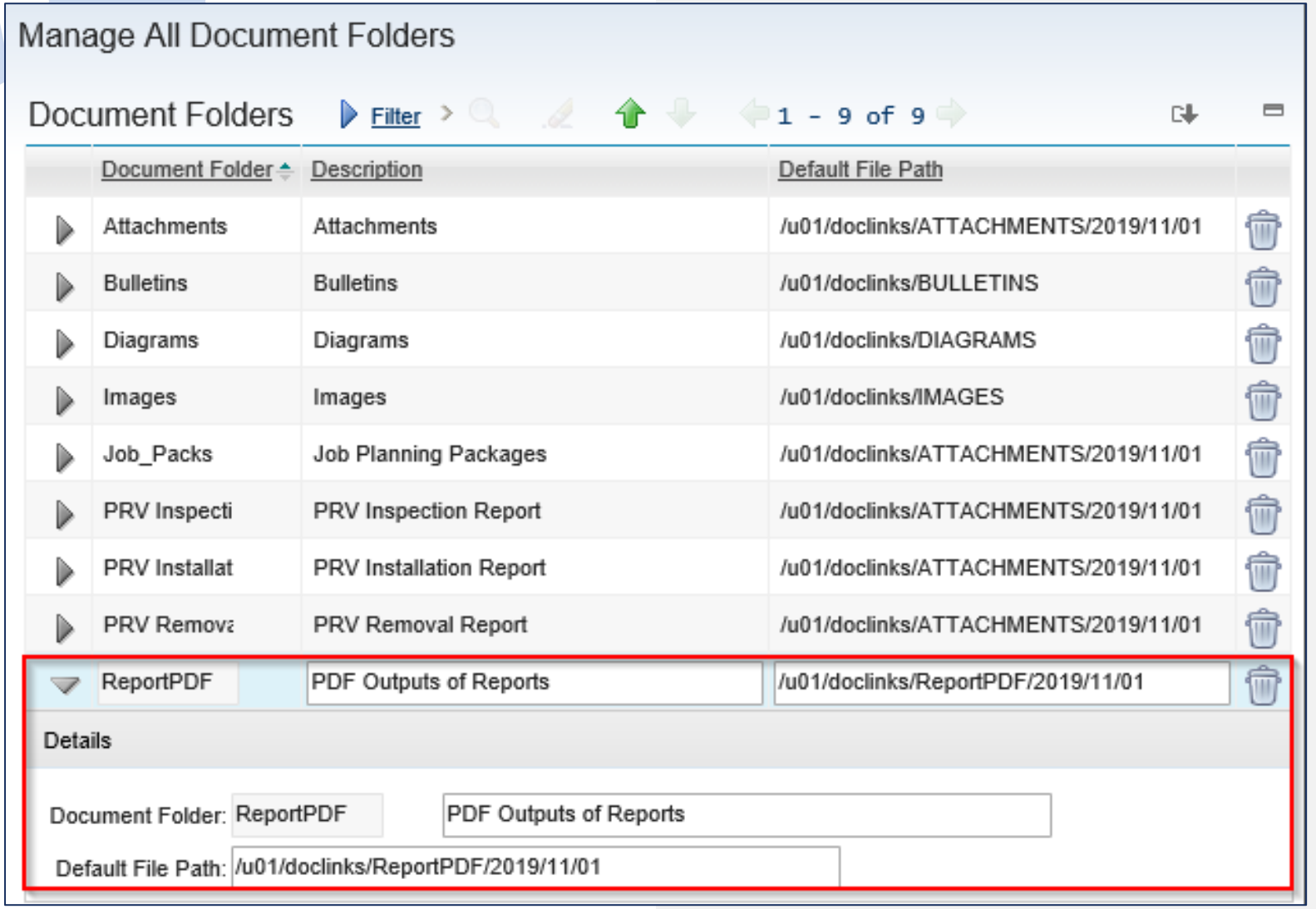
The Attachment Folder



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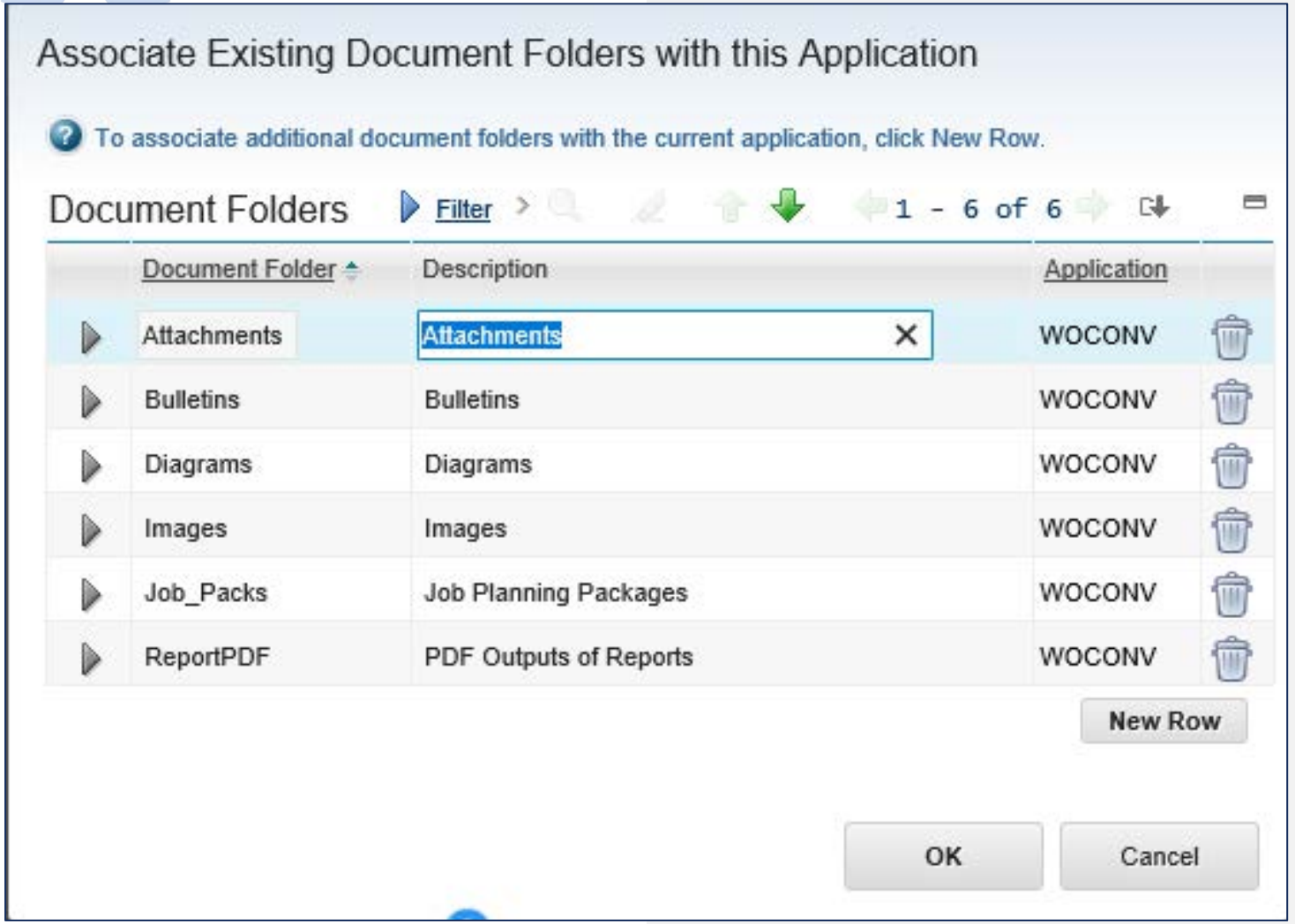
The Associate Folder



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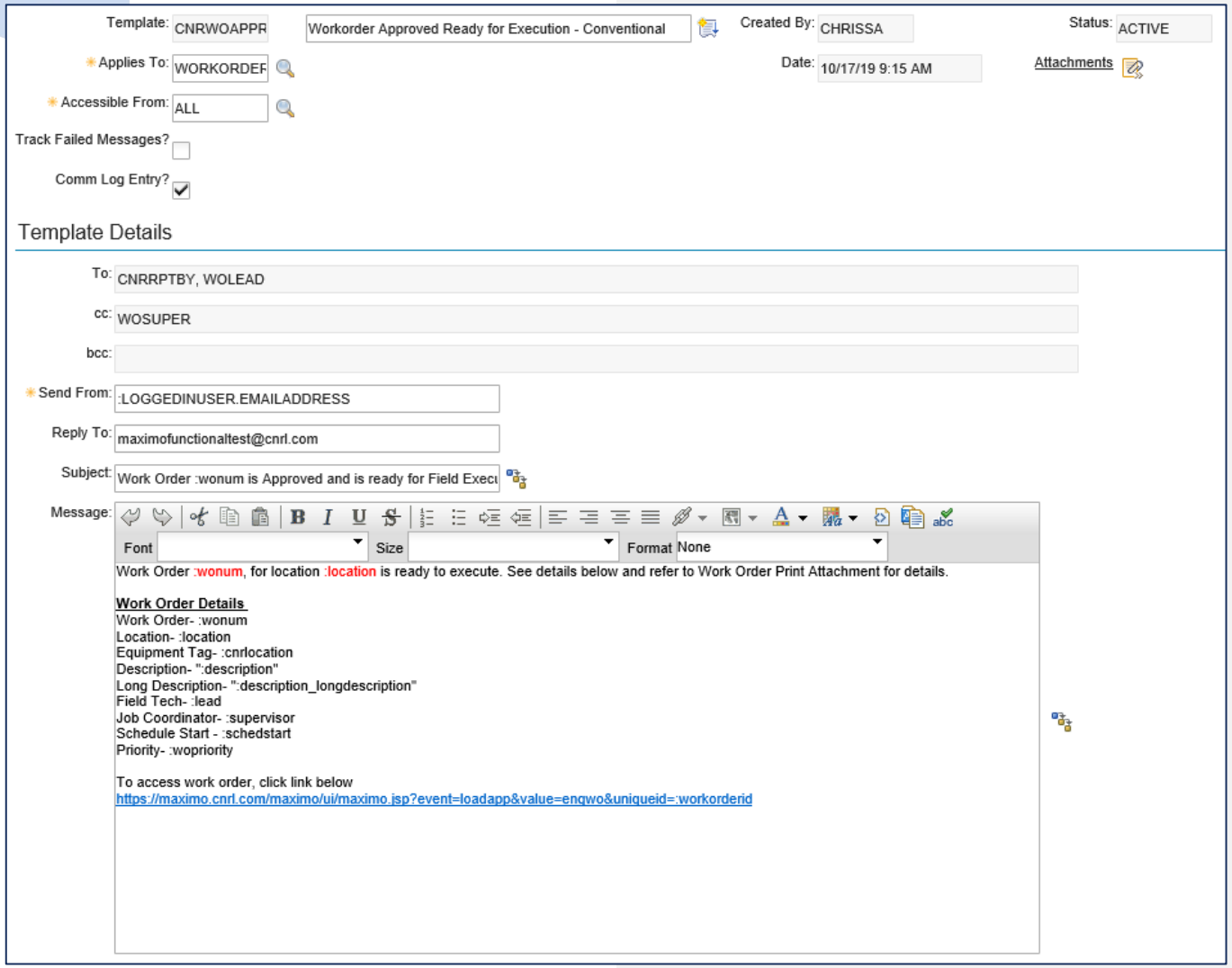
Communication Template



Template: CNRWOAPPR — Workorder Approved Ready for Execution - Conventional
Created By: CHRISSA
Status: ACTIVE
Applies To: WORKORDEF
Date: 10/17/19 9:15 AM
Attachments
Accessible From: ALL
Track Failed Messages?
Comm Log Entry?

Template Details

To: CNRRPTBY, WOLEAD
cc: WOSUPER
bcc:
Send From: :LOGGEDINUSER.EMAILADDRESS
Reply To: maximofunctionaltest@cnrl.com
Subject: Work Order :wonum is Approved and is ready for Field Execu
Message:

Font | Size | Format None

Work Order :wonum, for location :location is ready to execute. See details below and refer to Work Order Print Attachment for details.

Work Order Details
Work Order- :wonum
Location- :location
Equipment Tag- :cnrlocation
Description- ":description"
Long Description- ":description_longdescription"
Field Tech- :lead
Job Coordinator- :supervisor
Schedule Start - :schedstart
Priority- :wopriority

To access work order, click link below
https://maximo.cnrl.com/maximo/ui/maximo.jsp?event=loadapp&value=enqwo&uniqueid=:workorderid

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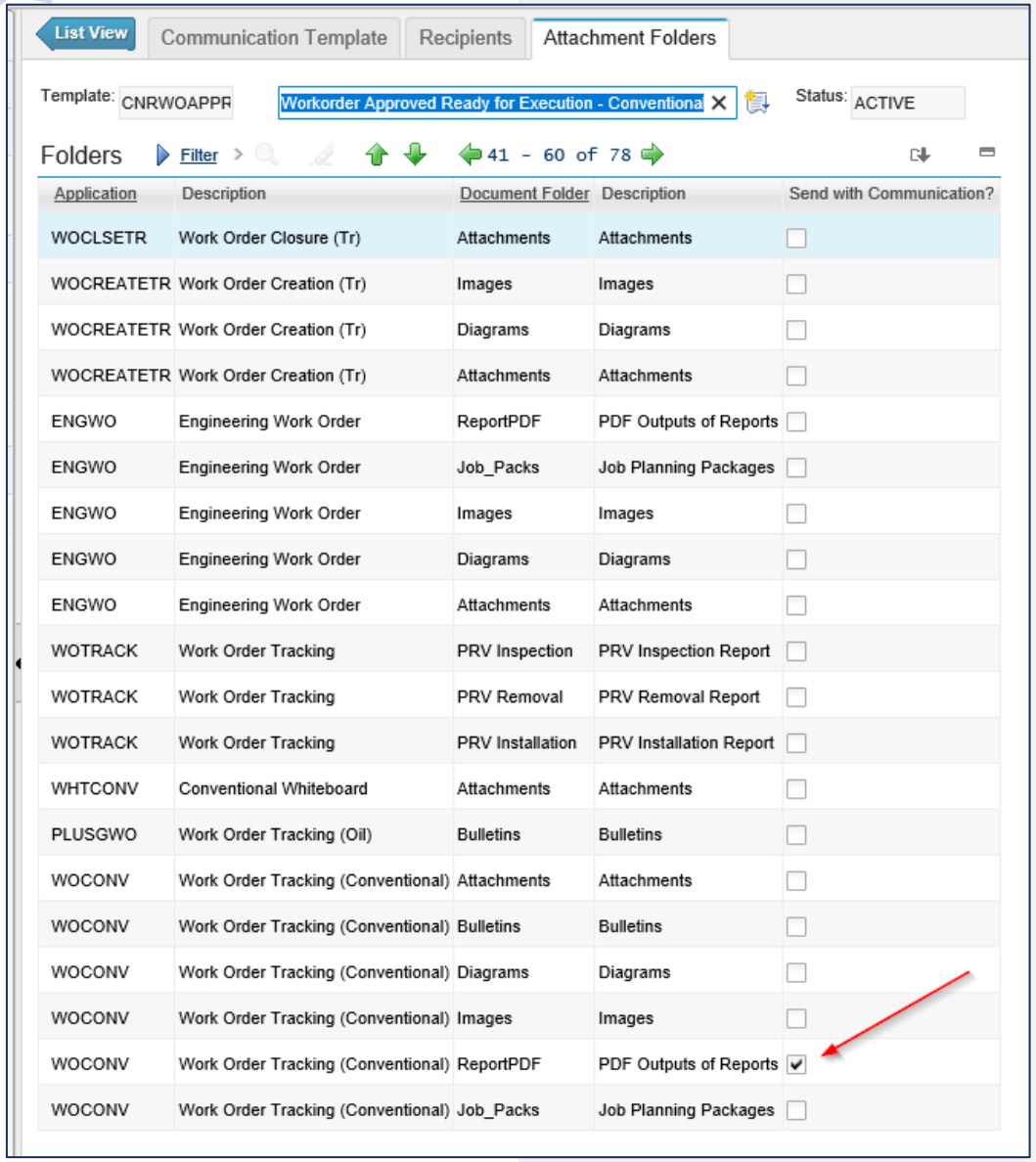
Communication Template



Application	Description	Document Folder	Description	Send with Communication?
WOCLSETR	Work Order Closure (Tr)	Attachments	Attachments	☐
WOCREATETR	Work Order Creation (Tr)	Images	Images	☐
WOCREATETR	Work Order Creation (Tr)	Diagrams	Diagrams	☐
WOCREATETR	Work Order Creation (Tr)	Attachments	Attachments	☐
ENGWO	Engineering Work Order	ReportPDF	PDF Outputs of Reports	☐
ENGWO	Engineering Work Order	Job_Packs	Job Planning Packages	☐
ENGWO	Engineering Work Order	Images	Images	☐
ENGWO	Engineering Work Order	Diagrams	Diagrams	☐
ENGWO	Engineering Work Order	Attachments	Attachments	☐
WOTRACK	Work Order Tracking	PRV Inspection	PRV Inspection Report	☐
WOTRACK	Work Order Tracking	PRV Removal	PRV Removal Report	☐
WOTRACK	Work Order Tracking	PRV Installation	PRV Installation Report	☐
WHTCONV	Conventional Whiteboard	Attachments	Attachments	☐
PLUSGWO	Work Order Tracking (Oil)	Bulletins	Bulletins	☐
WOCONV	Work Order Tracking (Conventional)	Attachments	Attachments	☐
WOCONV	Work Order Tracking (Conventional)	Bulletins	Bulletins	☐
WOCONV	Work Order Tracking (Conventional)	Diagrams	Diagrams	☐
WOCONV	Work Order Tracking (Conventional)	Images	Images	☐
WOCONV	Work Order Tracking (Conventional)	ReportPDF	PDF Outputs of Reports	☑
WOCONV	Work Order Tracking (Conventional)	Job_Packs	Job Planning Packages	☐

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Edit WO Application XML

Export Work Order application xml and edit it with Notepad++.

Export library.xml, find CREATECOMM Dialog, then copy and pasted the XML for the dialog from Library.xml to Work Order application xml file (in the dialog section).

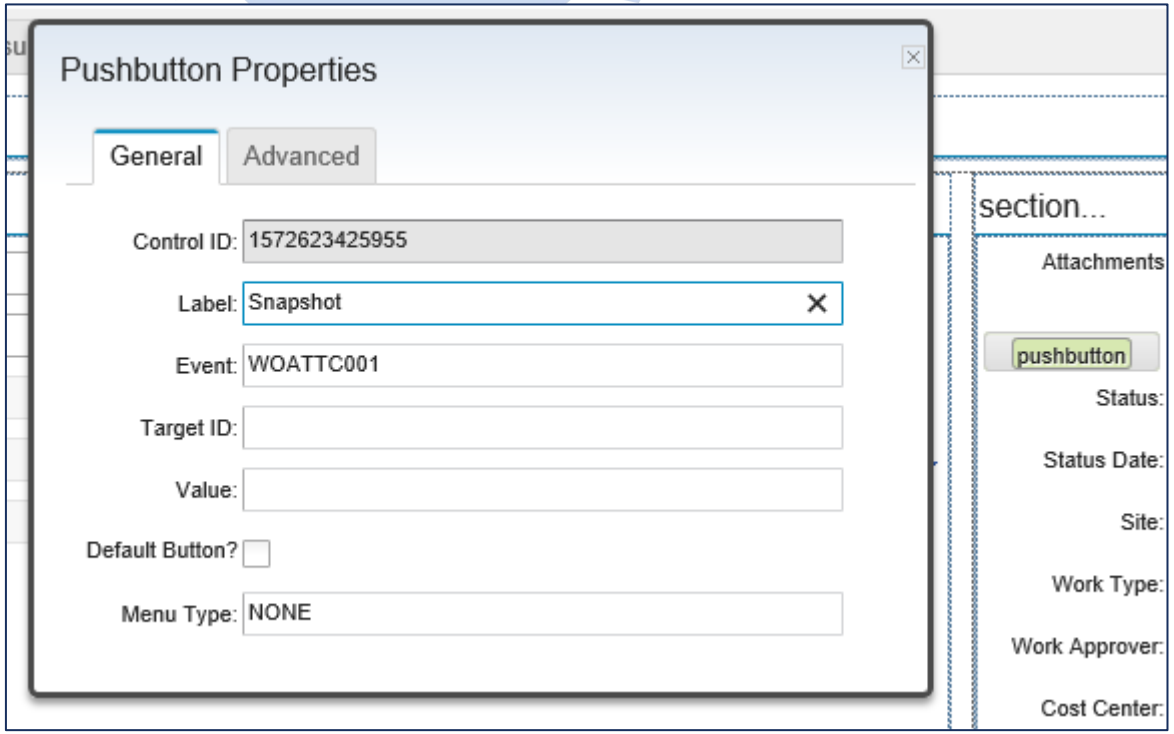
Add the following highlighted line to the createcomm dialog in the WO app… Note the Value is the name of the communication template to be used as a default.

```
<dialog beanclass="psdi.webclient.beans.common.CreateCommBean" id="CREATECOMM" label="Create Communication" relationship="COMMLOG" savemode="ONLOAD">
    <helpgrid id="createcomm_help" innerhtml="To create communication, select a template or directly enter the message and details."/>
    <section id="createcomm_grid1a">
        <defaultvalue dataattribute="TEMPLATEID" defaulttype="insert" id="1396458360031" value="CNRWOAPPR_CONV"/>
        <textbox applink="commtmplt" dataattribute="TEMPLATEID" id="createcomm_grid1_1" lookup="commtmplt" menutype="COMMLOGTMPLTID" ondatachange="resetchildren"/>
    </section>
```

Then import the Work Order application xml back into Maximo.

PUSHBUTTON TO TEST

Add pushbutton to Application
Note: Event name needs to be the name of the action created by the automation script.



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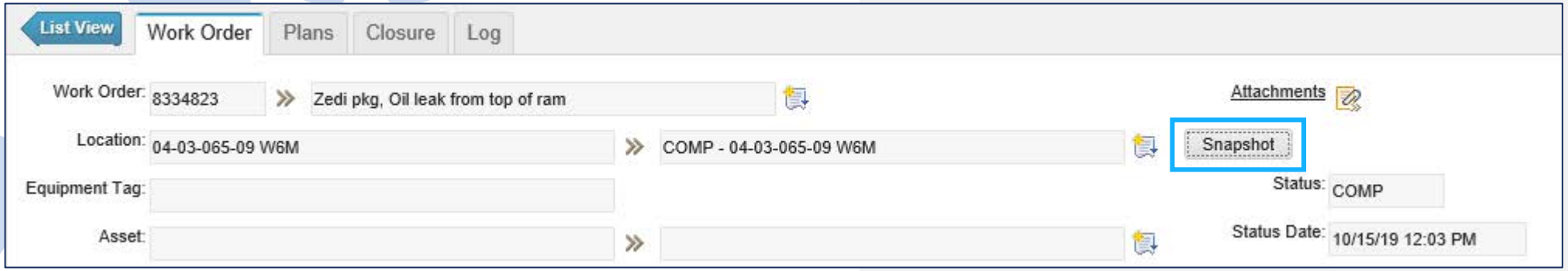
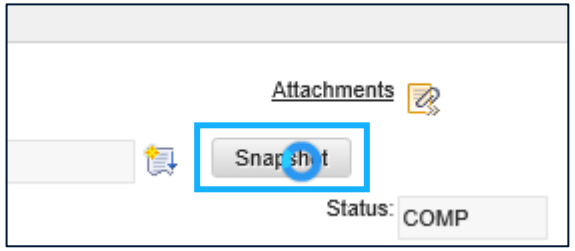
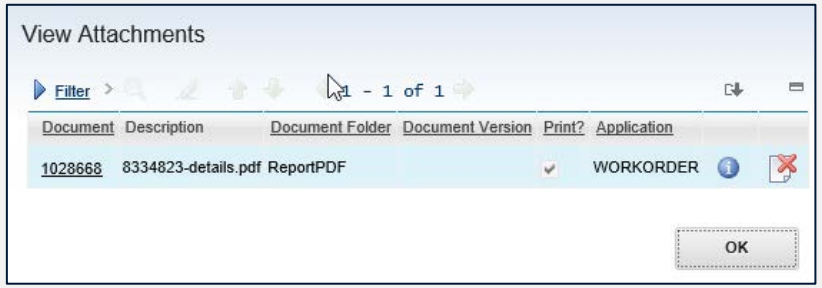
Communication Template





- **Click Snapshot button to run the script**

- **Save the record**



- **Notice there are now Attachments on the Work Order. Click to view them.**

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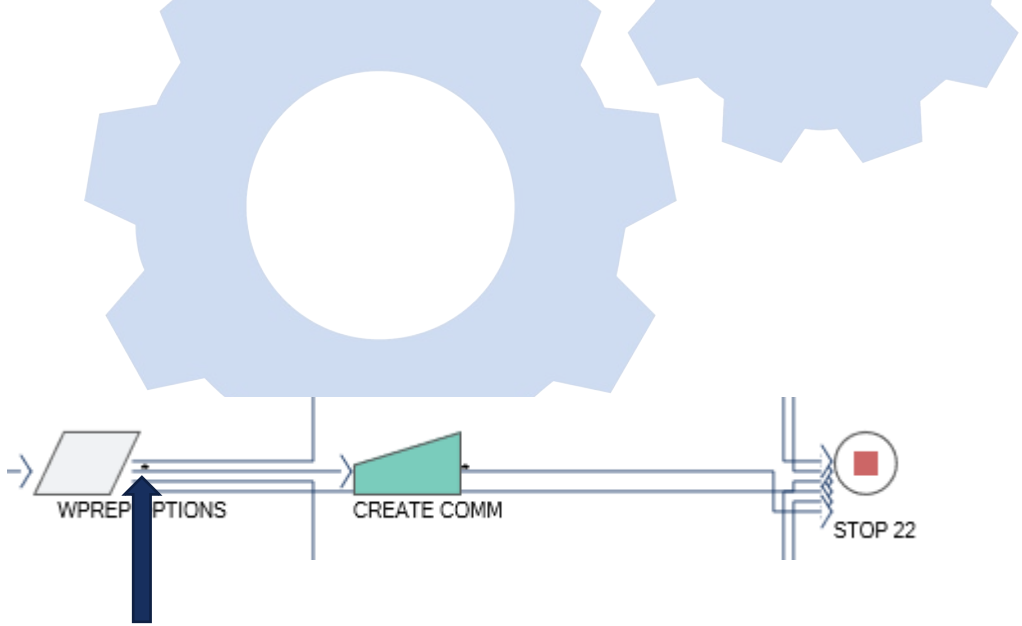
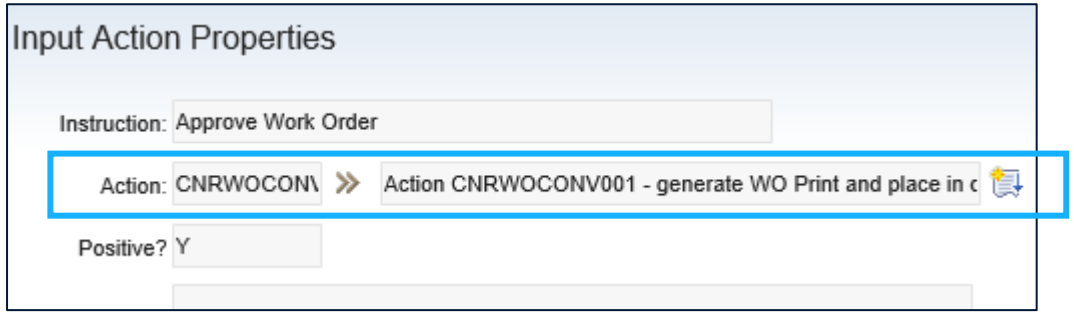
ADD TO WORKFLOW

The current workflow had an action to approve the Work Order.

It was already presenting a communication template to the user and the approving the Work Order.

Just added the ACTION created by the automation script to the action line before the Create Comm interaction node.





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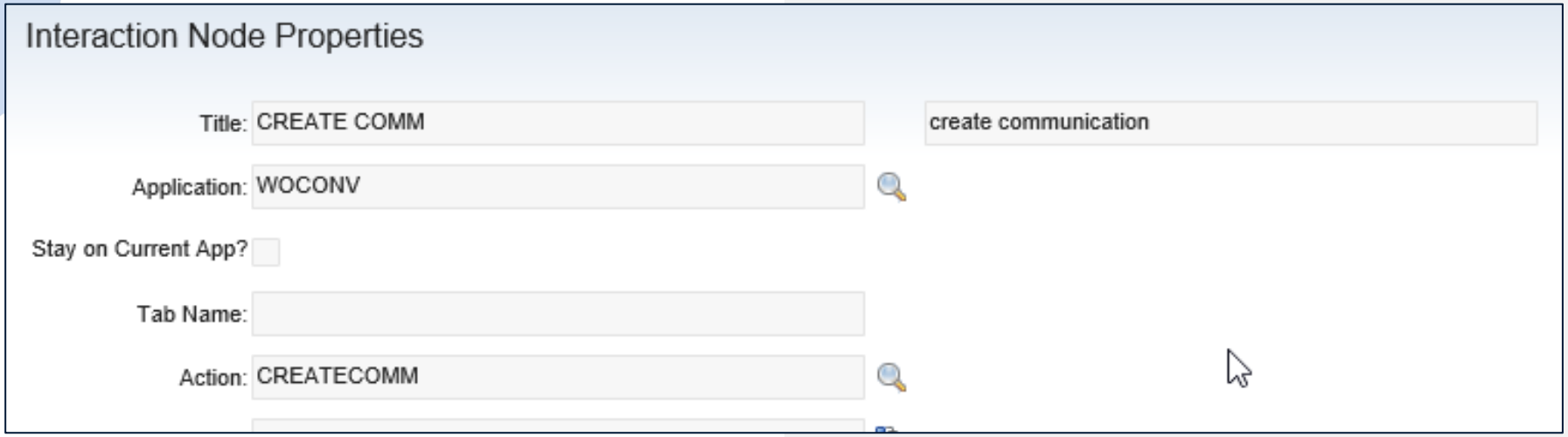
Create Comm Interaction Node



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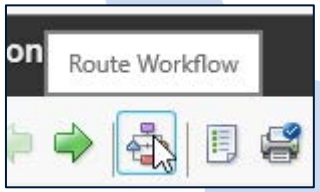
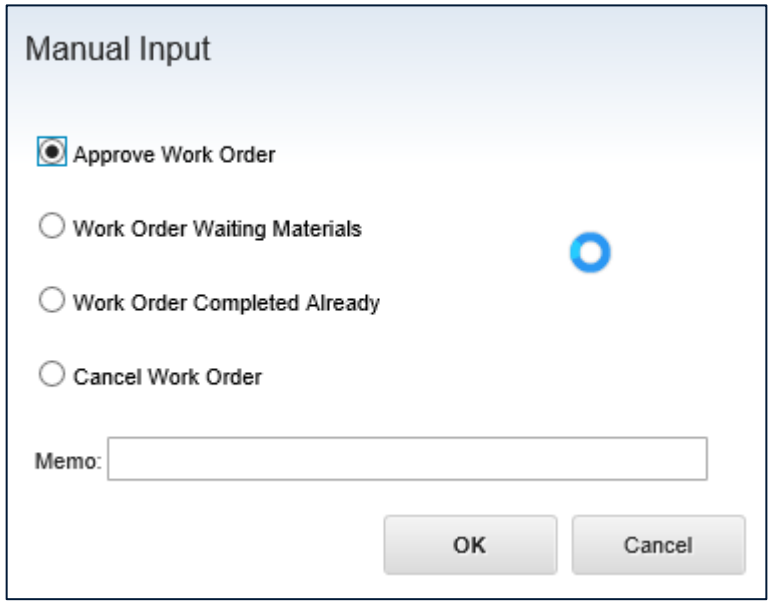
TEST THE WORKFLOW

**Find a Work Order ready to be approved and then
Route Workflow.**

Select the option to Approve the Work Order and click OK.

Note: This will take some time for the automation script to run the BIRT report, convert it to PDF and save it as an attachment to the Work Order.





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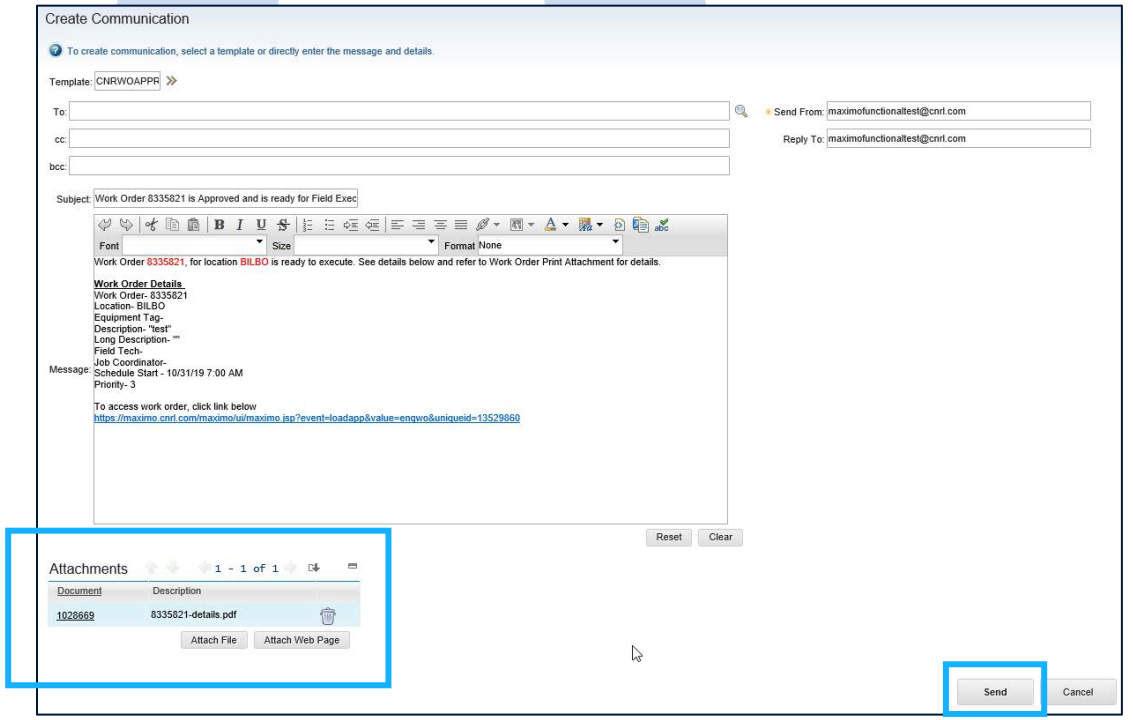
TEST THE WORKFLOW

Comm Template appears and it has an attachment.

Click Send (will only work with a recipient and if the email server is configured in Maximo)

The Work Order now has attachments, and the status = APPR

======= SUCCESS ========



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THANK YOU!

Success! You should have learned how to create an automation script to attach a Work Order detail report to an email communication when a Work Order is status Approved.

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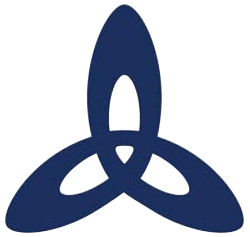

Ask us a technical question:

maxtech@bpdzenith.com

www.bpdzenith.com/maxtech

MaxTECH is the first ever dedicated Maximo Technical User Group aimed at Maximo Administrators, Developers and Technical Support staff.

It is a great place for users to ask and answer technical questions, learn from each other, collaborate and help improve Maximo in your organization.

MaxTECH was founded in 2017 by BPD Zenith and is chaired by Maximo Consultant Stephen Hume. We host several events every year (Calgary, St. Louis, MaximoWorld, Houston, MUWG, Northern California MUG, Maximo UK & Ireland User Group) including digital events.

MaxTEACH is a free online user group designed to go in depth into a Maximo topic.