

All locations were provided with system-specific AWIPS *radar file help sheets* that incorporated data new to OB6 and RPG Build 8 by the WSR-88D Hotline with the OB6 roll-out. However, info relative to **orpgBackups.txt** and **WAN Dedicated** operations has continued to evolve long after the OB6 deployment. The overview that was initially provided for **orpgBackups.txt** consequently should be considered obsolete and superseded with the overview that follows. Site-specific orpgBackups.txt radar access remains as identified with the initially provided OB6 radar file help sheet.

orpgBackups.txt - this file was introduced with AWIPS OB6 and RPG Build 8 and reflects adaptation data for establishing a TCP/IP dedicated-like connection across the AWIPS terrestrial WAN. WAN Dedicated connections employ an RPS List for product selection from an RPG that is not co-located. This capability is applicable only to WFO AWIPS and select Regional HQ systems at this time.

The file orpgBackups.txt is configured in accordance with NWS Regional directives so that every RPG has at least one “primary” and usually at least one “secondary” non-associated AWIPS assigned to its “WAN Dedicated” port. But note carefully that since this connection is virtually dedicated, only one AWIPS system at a time will be able to employ this feature. If you attempt to establish a connection using this feature and see a radar status feedback message of “**Login Failed**” or “**Connection Refused**”, you should assume the port is already being employed by another adjacent AWIPS system. The latter can be confirmed by calling the office controlling the WSR-88D and having them check the status of Product Distribution Comms Status screen line number 29 – the port that has been created for this connection on the RPG end. Since at least one other office will have access to this port, it is recommended that you discuss strategies for sharing this port as weather situations dictate with that office(s).

WFO-specific info is provided here with your office's AWIPS radar file help sheet of the format; In [site's name] case you will share WAN dedicated access to [Kxxx] with [alt backup 1 site's name] and access to [Kxxx] with [alt backup 2 site's name]. Products can be obtained via WAN OTR or RMR when the alternate office is given higher priority access to the WAN dedicated port.

As noted in the orpgOTRs.txt overview, NWS RPGs employ aggregate “flow control” up to 128 Kbps (64 Kbps for DoD and FAA Build 8 radars) across this new port and the 4 WAN OTR ports. **Sites designated to employ this feature should be aware that their ability to employ an RPS List for this type of connection could result in their using an excessive amount of the aggregate bandwidth on the adjacent radar, potentially impacting the ability of other NWS users to obtain products via WAN OTR. Sites are therefore asked to keep the RPS Lists they employ for this feature to an operational minimum.**

In order to further minimize the potential impacts to WAN OTR operations and AWIPS WAN bandwidth utilization, WAN Dedicated connections should only be initiated approximately one hour prior to the onset of the weather condition or feature

that necessitates the connection. Similarly, as soon as the weather condition or feature that necessitates the use of a WAN Dedicated connection abates, the connection should immediately be terminated.

Phone the NCF in advance of starting a WAN Dedicated connection. The NCF has been asked to maintain a log reflecting how many connections are running network-wide at any given time. If WAN congestion is subsequently detected, the log will help the NCF quickly rule out WAN Dedicated connections as being a factor.

You will need to manually create RPS Lists for radar(s) you will connect to over the WAN and those RPS lists will need to reside in /data/fxa/radar/lists. Without having RPS Lists in place, you will not see any data flow upon connection. DR16564 has already been submitted to make the RPS List(s) associated with orpgBackups.txt available via the OTR GUI in a subsequent AWIPS Build. When you establish a WAN Dedicated connection you will cease receiving products from that radar via the SBN. Upon entering into a true radar backup situation (see Scenario B below) where you will be sending the data for the radar that you are backing up to central collection, the local default lists that you create will merge with the appropriate national list (these can be found in /data/fxa/nationalData and are called rps-RPGOP-tcp.clear-air and rps-RPGOP-tcp.storm). Keep this in mind when creating local default lists because anything over 65 products after the merge will be eliminated from the local list as the products on the national list have precedence.

For example, on dx1, as user fxa: **cd /data/fxa/radar/lists**

Then copy pre-existing Precip Mode RPS Lists for your associated radar for this purpose following the example:

```
cp -p KNNN.storm.VCP11 /data/fxa/radar/lists/KXXX.storm.VCP11  
cp -p KNNN.storm.VCP12 /data/fxa/radar/lists/KXXX.storm.VCP12  
cp -p KNNN.storm.VCP121 /data/fxa/radar/lists/KXXX.storm.VCP121
```

where KNNN equates to RPS List(s) you employ with your associated radar, and KXXX equals RPS Lists you are establishing for the non-associated radar. Ensure the newly created RPS Lists include 65 or fewer products.

It is strongly recommended that sites confirm that orpgBackups.txt is preconfigured upon receipt of this guidance so that the loss of radar data will be minimal in an emergency situation.

Once the configuration files have been updated, WAN Dedicated connections can be initiated by following the steps provided below based on the purpose of the connection. Follow **Scenario A** for Routine Operational Purposes in which you would like to employ an RPS list to retrieve data from a non-associated WSR-88D when you do not have the added responsibility of sending the retrieved data to central collection. Follow **Scenario B** if you are going into a true radar backup in which your system will be responsible for sending the acquired data to central collection. Alternatively, you may call the AWIPS NCF at (301) 713-9344 and request that the NCF initiate the connection for you.

Scenario A – Routine Operational Purposes:

1. As root on DX2, check 'hb_stat'. Perform the following steps on whichever Server dx2apps is running.
2. Make sure /awips/fxa/data/orpgBackups.txt has been updated.
3. Make sure you have the latest revision of wmoSiteInfo.txt installed (see: /awips/fxa/data/wmoSiteInfo.txt) that includes the 3-letter mnemonic associated with the new WAN Dedicated radar(s) you have access to. By default your office will not be the sending site for these radars so the 'send flag' (to central collection) will be "N" (NO !).
4. Change the default setting of "3" in radarsInUse.txt – (/awips/fxa/data/localizationDataSets/XXX/radarsInUse.txt) to "2".

... as user fxa

5. Initiate the ORPGCommsMgr KNNN process by issuing '/awips/fxa/bin/ORPGCommsMgr *KNNN*' where *KNNN* is the radar ID.
6. Kill the RadarStorage process (will be restarted by its DataController), and kill the RadarServer and restart by typing '/awips/fxa/bin/RadarServer &'.
Note: The RadarStorage process will be restarted by its DataController, and the RadarServer will be restarted by typing '/awips/fxa/bin/RadarServer &'.
7. Tail the newly created ORPGCommsMgr log to make sure an RPS list was sent and data is being received.

NOTE: The restartRadar cron will NOT restart a WAN Dedicated ORPGCommsMgr process. If the process is stopped or fails for any reason (including a stop/start of dx2apps), it will need to be restarted manually.

Scenario B - True Radar Backup Purposes - a true radar backup mode where your office's AWIPS will be responsible for sending the acquired radar data to central collection.

1. As root on DX2, check 'hb_stat'. Perform the following steps on whichever server dx2apps is running.
2. Make sure /awips/fxa/data/orpgBackups.txt has been updated.
3. Make sure you have the latest revision of wmoSiteInfo.txt installed (see: /awips/fxa/data/wmoSiteInfo.txt) that includes the 3-letter mnemonic associated with the new WAN Dedicated radar(s) you have access to. By default your office will not be the sending site for these radars so the 'send flag' (to central collection) will be "N" (NO !). Modify the send flag in wmoSiteInfo.txt and change it from "N" to "Y" (Yes) in order to start sending that radar's data to central collection.
4. Change the default setting of "3" in radarsInUse.txt – (/awips/fxa/data/localizationDataSets/XXX/radarsInUse.txt) to "2".

... as user fxa

5. Initiate the ORPGCommsMgr KNNN process by issuing '/awips/fxa/bin/ORPGCommsMgr *KNNN*' where *KNNN* is the radar ID.
6. Kill the RadarStorage process (will be restarted by its DataController), and kill the RadarServer and restart by typing "/awips/fxa/bin/RadarServer &".
Note: The RadarStorage process will be restarted by its DataController, and the RadarServer will be restarted by typing "/awips/fxa/bin/RadarServer &".

7. Tail the newly created ORPGCommsMgr log to make sure an RPS list was sent and data is being received.
8. In parallel with going into a true radar backup mode, please ensure the AWIPS NCF is aware of this intention. In parallel with changing the sending site for the radar data, NCF may need to also make some WMO Header changes so that the re-distribution of the radar's data to central collection is transparent to downstream systems. This could also affect surrounding NWS sites that would ordinarily receive and process the radar data from the 'host' WFO site ID via the SBN.
9. When notified that the *host* WFO is ready to resume sending responsibility for the radar being backed-up, un-do the changes made in Steps 3 and 4. Restore the 'send flag' to "N" in wmoSiteInfo.txt. Restore the default setting of "3" in radarsInUse.txt – (/awips/fxa/data/localizationDataSets/XXX/radarsInUse.txt).

NOTE: The restartRadar cron will NOT restart a WAN Dedicated ORPGCommsMgr process. If the process is stopped or fails for any reason (including a stop/start of dx2apps), you will need to manually restart the connection. Additionally, if while in Scenario B a localization is run and ingest is restarted, the WAN Dedicated connection will continue, but you will cease sending the data to central collection until the radarsInUse.txt file is changed again from a '3' to a '2' (since the localization would overwrite the changes made in Step 4).

Terminating the WAN Dedicated Connection: When you are ready to end the WAN Dedicated connection, follow these steps:

1. Run the following command as user fxa on DX2 (or wherever dx2apps is located):

~fxa/bin/stopORPGCommsMgr KNNN (this will stop the ingest from radar *KNNN*).

2. Reverse the changes made to radarsInUse.txt (both scenarios) and wmoSiteInfo.txt (Scenario B only)
3. Restart the RadarServer and RadarStorage processes on DX2

```
# Radar Radar ORPG IP TCP Link TCM RPS List
# Name ID address port index access maxRPSsize
# -----
```