

## “WAN Dedicated” (ORPG Backup) Operations

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Applicable only to WSR-88Ds at this time, this capability was introduced in the 2006 - 2007 timeframe with AWIPS OB6 and RPG Build 8.

The capability affords a TCP/IP dedicated connection across the AWIPS WAN to an RPG that is not co-located. The connections on the RPG end occur on Line 29. Once connected, product selection is predicated by RPS Lists that reside on the AWIPS initiating the connection. The capability is applicable only to WFO and select Regional HQ AWIPS systems.

**orpgBackups.txt** was the “radar file” introduced in AWIPS OB6 that facilitated the connection.

In accordance with guidance from the NWS Regions, **orpgBackups.txt** was populated for all applicable AWIPS systems to include the WSR-88D WAN Dedicated radar backup connectivity permissions, and then uploaded to an AWIPS radar file help sheet secure server at the ROC. ESA’s were then given access and asked to download the updates.

In general 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).

As noted in the **orpgOTRs.txt** overview provided with each office’s AWIPS radar file help sheet, RPGs employ aggregate “flow control” up to 128 Kbps across the WAN Dedicated 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 type of connection to an operational minimum. And this is why the "RPS List maxRPSsize" setting for these connections remains set to 65.**

Approved RC 16035 tasked the AWIPS NCF and the NEXRAD Hotline to work together towards ensuring WAN Dedicated operations are functioning properly on all applicable AWIPS systems. Towards that end all offices contacted were asked to refer to the AWIPS System Manager’s Manual SMM Chapter 7, Section 7.8 (starting on page 7-35 of the OB18 SMM), ‘ORPG Backup Operations in AWIPS II’. The link to build specific SMM is below and its

instructions should serve as your guide for initiating and terminating WAN Dedicated connections.

[https://vlab.noaa.gov/object\\_storage/awips/Documentation/](https://vlab.noaa.gov/object_storage/awips/Documentation/)

**\*\*\*It is VERY important to note that it is very easy to potentially disable the sending of your own dedicated WSR-88D data to the WAN, or disable your own radar altogether, as well as to disable WAN OTR access to adjacent WSR-88Ds using the RadarServer Configuration GUI. The NCF therefore encourages that the steps in the instructions be followed very closely and only be performed by those who have an awareness of the system.\*\*\***

The AWIPS NCF also asked that we emphasize that WAN Dedicated connections are not intended to be run on a full-time basis.

### **RPS List Considerations**

In the SMM "Scenario 2" situations where an office would be performing WSR-88D backup for a WFO and would therefore become the sender of that WSR-88D's Level III products, the entirety of the RPS list that is sent to the RPG would be made up of products from the "national" list (rps-RPGOP-tcp.[storm|clear-air]). This means that local RPS lists would not come into play for a true radar backup given the 65 product request limit for WAN Dedicated operations.

For SMM "Scenario 1", which are situational awareness connections, having local RPS Lists for each VCP come into play to augment products from those radars already being received via the SBN. Those RPS lists should be placed in /awips2/rcm/data/config/drop-ins (mounted on dx1 and dx2). If you choose not to create said lists, the list that is sent to the RPG upon initiation of the backup connection will be one generated from the generic baseline lists, which are the ones named KXXX.<storm|clear-air>.VCP<number> in your drop-ins directory, up to that same 65 product request limit.