GALAXY-20 has been changed to include the following new features:

- Alias Printers Support
- Adding the /CLUSTER-NODE switch to additional OPR commands
- The selective routing and receiving of remote OPR messages

These additions are described below.

1.0 ALIAS PRINTERS SUPPORT

It is now possible to refer to printers by aliases rather than by their physical specifications. The following commands have been added to support this feature:

- DEFINE ALIAS alias {alias | physical printer specification | null} {/CLUSTER-NODE:cluster-node-name or "*"}
- SHOW ALIAS {alias | CLUSTER | DQS | LAT | LOCAL | physical printer specification | null} {/CLUSTER-NODE: cluster-node-name or "*"}

1.1 The DEFINE ALIAS Command

The DEFINE ALIAS command allows an operator to uniquely DEFINE, reDEFINE or unDEFINE alias names to local, DQS, LAT, and CLUSTER printers. Once an alias is defined for a printer, that printer may be specified solely by its alias. An example of the DEFINE ALIAS command is:

OPR>DEFINE ALIAS FOO ? one of the following predefined alias names:
    BAR     BIN     FOO
    or unit number
    or one of the following:
    CLUSTER DQS LAT
    or /CLUSTER-NODE:
    or confirm with carriage return

1.1.1 Defining An Alias To A Printer Specification

The following command maps the alias FOO to the CLUSTER printer specification of CLUSTER 1 NODE GIDNEY:

OPR>DEFINE ALIAS FOO CLUSTER 1 NODE GIDNEY
1.1.2 Redefining An Alias

The following reDEFINEs the alias FOO to alias BAR:

OPR>DEFINE ALIAS BAR FOO

This command changes the alias name from FOO to BAR. (I.e., BAR is now mapped to the CLUSTER Printer 1 on node GIDNEY.) Note: If BAR is a previously defined alias, then its previous definition is removed since there can only be one alias name associated with a printer specification.

To Undefine the alias BAR:

OPR>DEFINE ALIAS BAR

This command will unmap FOO's mapping to the CLUSTER Printer 1 for node GIDNEY.

NOTE

- It is possible to define an alias for a printer that has not yet been STARTed or SET.
- Alias names are only known in GALAXY context, i.e., they are not known at the EXEC level.

1.1.3 Recommendations For System Manager

It is recommended that all alias to physical printer specification mappings be defined at GALAXY startup by including the appropriate DEFINE ALIAS commands in 7-SYSTEM.CMD

To avoid confusion, it is also recommended that all nodes in a cluster maintain identical alias to printer mappings.

1.2 The SHOW ALIAS Command

The SHOW ALIAS command will display the alias to printer specification mappings which have been previously defined. The syntax of the command will include the following:

OPR>SHOW ALIAS

This shows all the current alias name to physical specification mappings.
The SHOW ALIAS Command

OPR>SHOW ALIAS (CLUSTER | DQS | LAT | LOCAL)

This shows all the current alias name to physical name mappings for the specified printer type.

OPR>SHOW ALIAS FOO

This shows the printer specification which has been mapped to FOO.

The SHOW ALIAS display will have the following format:

OPR>SHOW ALIAS
14:34:30           -- Alias Printer Mappings --

Local printers
  Alias  Unit
  ------  ----
  FOO     0
  BAR     2

DQS printers
  Alias          DQS queue name    Node
  ------  -------------------------------  -----
  XEROX1   TOPS$LN03      GALLO
  XEROX2   LVDS$LN03      MED
  XEROX3   SIS$BENSON    MRSVAX

LAT PORT printers
  Alias      Port name    Server
  ------  ----------------    -----
  PLAT1    24004_LN03A    LAT1
  PLAT2    24004_LN03B    LAT70
  PLAT3     LN03        LAT71

LAT SERVER printers
  Alias     Service name  Server
  -----  ------------    -----
  SLAT     LN03_4       LAT_1

2.0 ADDING THE /CLUSTER-NODE SWITCH TO ADDITIONAL OPR COMMANDS

The following commands now have the /CLUSTER-NODE: switch which allows them to be executed on a remote node in the cluster:

ABORT
ALIGN PRINTER
BACKSPACE PRINTER
CANCEL
ADDING THE /CLUSTER-NODE SWITCH TO ADDITIONAL OPR COMMANDS

CLOSE LOG
CONTINUE
DEFINE ALIAS
DISABLE (except for DISABLE OUTPUT-DISPLAY)
DISMOUNT
ENABLE (except for ENABLE OUTPUT-DISPLAY)
FORWARDSPACE
HOLD
IDENTIFY
MODIFY
MOUNT
NEXT
RELEASE
REPORT
REQUEUE
RESPOND
ROUTE
SEND
SET (excluding SET ONLINE)
SHOW (excluding SHOW CONTROL-FILE and SHOW TIME)
SHUTDOWN (excluding SHUTDOWN NODE)
START (excluding START NODE)
STOP
SUPPRESS
SWITCH
UNDEFINE
THE SELECTIVE ROUTING AND RECEIVING OF REMOTE OPR MESSAGES

3.0 THE SELECTIVE ROUTING AND RECEIVING OF REMOTE OPR MESSAGES

It is now possible to selectively route messages from one node in a cluster to another node in that cluster. Furthermore, an operator can selectively enable or disable to receive messages that are routed from a remote node in the cluster to that operator's node.

The following commands have been added in support of this feature:

- **ENABLE/DISABLE BROADCAST-MESSAGES** message-type NODE cluster-node-name or * {/CLUSTER-NODE: cluster-node-name or *}
- **SHOW BROADCAST-MESSAGES** {NODE cluster-node-name or *} {/CLUSTER-NODE: cluster-node-name or *}
- **ENABLE/DISABLE OUTPUT-DISPLAY** message-type {NODE cluster-node-name or *}
- **SHOW OPERATOR/ALL** {/CLUSTER-NODE:cluster-node-name or *}

The **ENABLE/DISABLE BROADCAST-MESSAGE** commands enable or disable the sending of the specified messages to the indicated remote cluster node or to all remote nodes if "*" was specified.

The **SHOW BROADCAST-MESSAGES** command shows which messages have been enabled or disabled to be sent to the indicated remote cluster node or to all remote cluster nodes if "*" was specified or if the NODE keyword is missing.

The **ENABLE/DISABLE OUTPUT-DISPLAY** commands now include the NODE keyword. The NODE keyword indicates that the display of the specified messages from the indicated node, or all nodes if "*" was specified, are to be enabled or disabled.

The **SHOW OPERATOR** command now has the /ALL switch which indicates for each message type whether the display of that message type is enabled or disabled. If an operator has enabled or disabled message displays for messages from remote nodes in the cluster, these are also shown.

It should be noted that for a message to be displayed from a remote node in the cluster, the command **ENABLE BROADCAST-MESSAGE** for that message type must be given on that remote node. In addition, the operator on the local node must give the **ENABLE OUTPUT-DISPLAY** command for that message type indicating the remote node as the NODE keyword argument.

The intent of the broadcast messages feature is to allow an operator, logged-in to one node in a cluster, to see messages being generated on remote nodes in that cluster. For example, in a two-node cluster with nodes FOO and BAR, assume that an operator is logged in on node FOO and wishes to see all messages generated on node BAR. The following commands could be used:
OPR> ENABLE BROADCAST-MESSAGES ALL-MESSAGES NODE FOO /CLUSTER-NODE:BAR
OPR>
14:07:02 Received message from BAR::
14:06:48 -- Broadcast message display modified --
OPR> ENABLE OUTPUT-DISPLAY ALL-MESSAGES NODE BAR
OPR>
14:07:44 -- Output display for OPR modified --
OPR> SHOW BROADCAST-MESSAGES/CLUSTER-NODE:BAR
OPR>
14:08:29 Received message from BAR::
14:08:15 -- Broadcast Messages --

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OPR> SHOW OPERATORS/ALL
OPR>
14:08:57 -- Operators --

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THE SELECTIVE ROUTING AND RECEIVING OF REMOTE OPR MESSAGES

Ena  Ena  DECNET-EVENT-MESSAGES
Ena  Ena  DECNET-LINK-MESSAGES
Ena  Ena  SYSTEM-MESSAGES
Ena  Ena  LCP-MESSAGES
Ena  Ena  NCP-MESSAGES

**** SEMI-OPR is enabled ****