Multi-Service over PVC (MSP) How To

For BCM963xx DSL Linux

Version 1.0

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Table of Contents

1.0 Background..... 2

2.0 How To Create MSP services 2

3.0 MSP Compatibility and Restrictions 8

4.0 Information about Implementation..... 8

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REVISION HISTORY

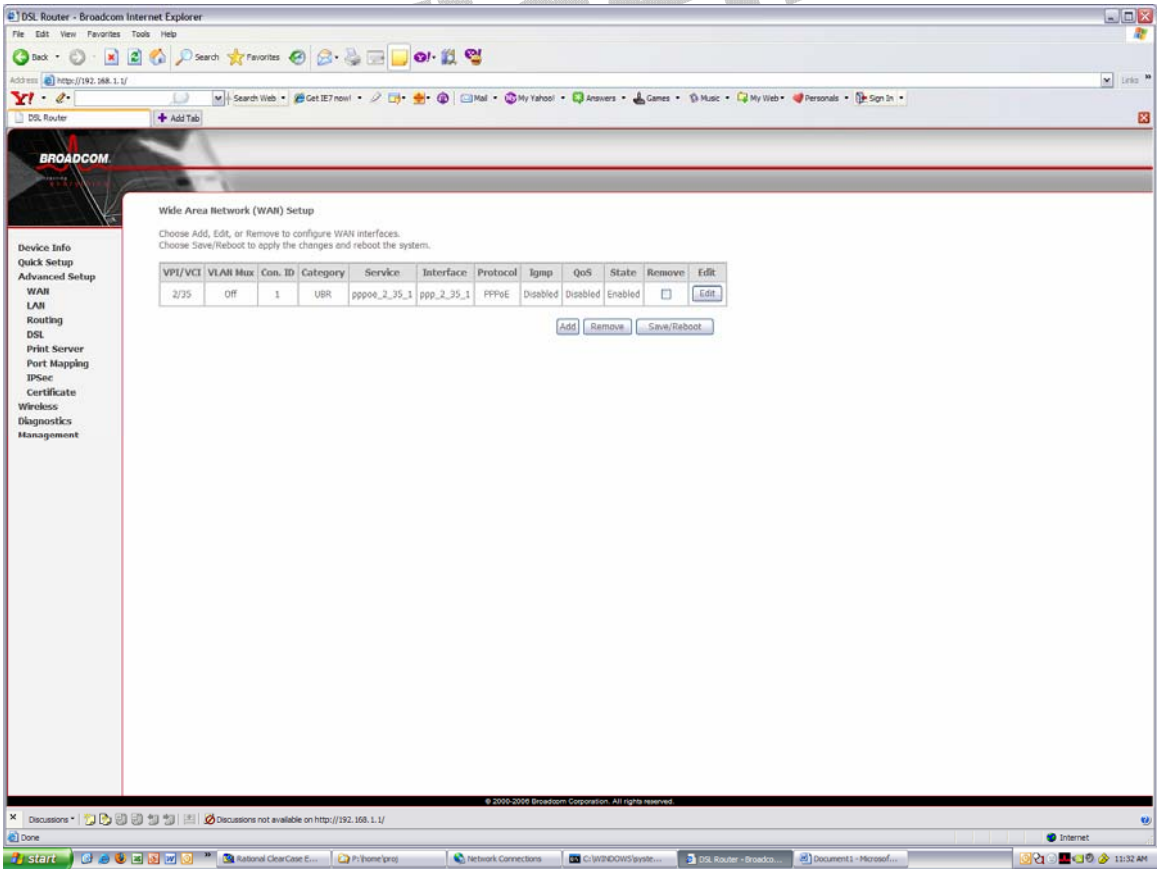
Revision Number	*Date*	*Change Description*
V1.0	11/01/2006	Initial Release.

1.0 BACKGROUND

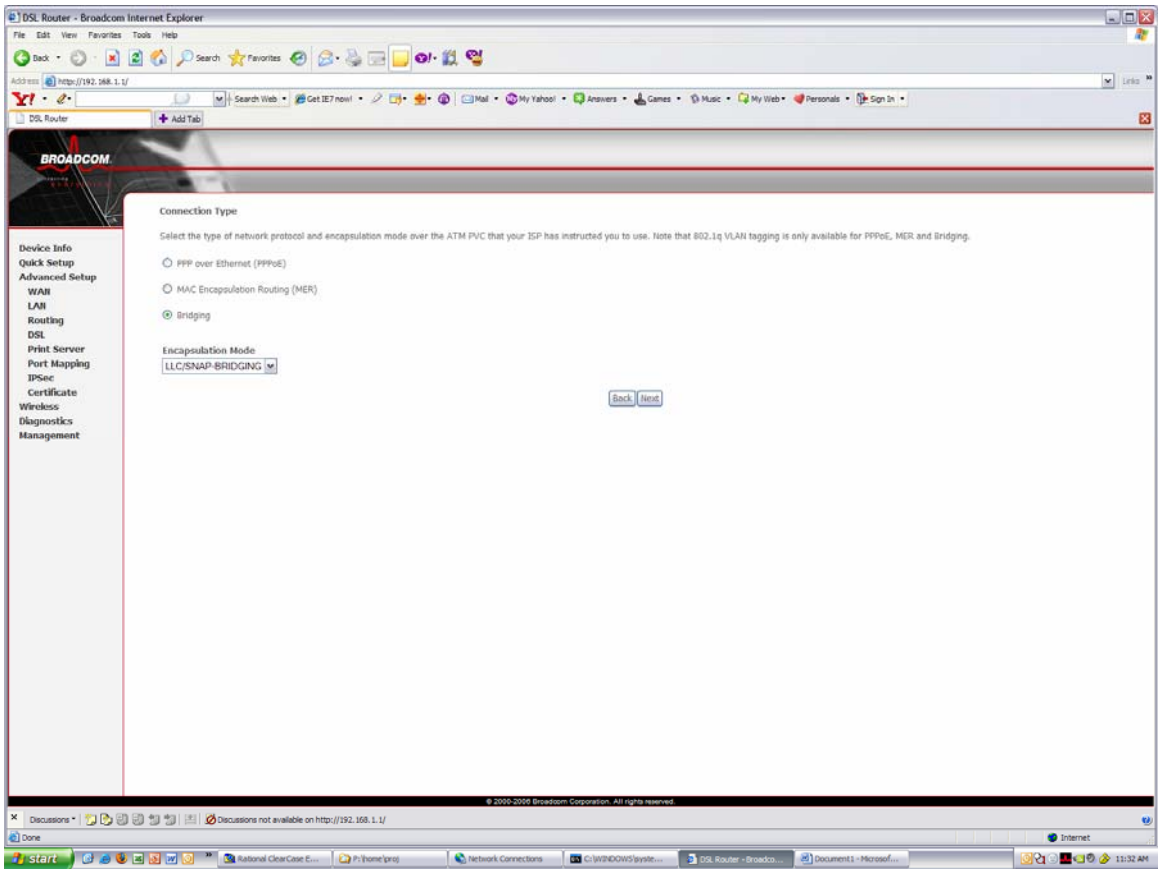
Multi-Service over a PVC (MSP) is a feature for the Broadcom xDSL router to concurrently support PPPoE, Bridge, and MER services over single PVC. With this feature, users can configure Bridge and multiple PPPoE protocols over the same PVC. Also the MER protocol and bridge protocol can be coexisted on the single PVC. The feature is important for supporting remote management for bridge configuration and triple play applications in the environment where only single PVC is allowed.

2.0 HOW TO CREATE MSP SERVICES

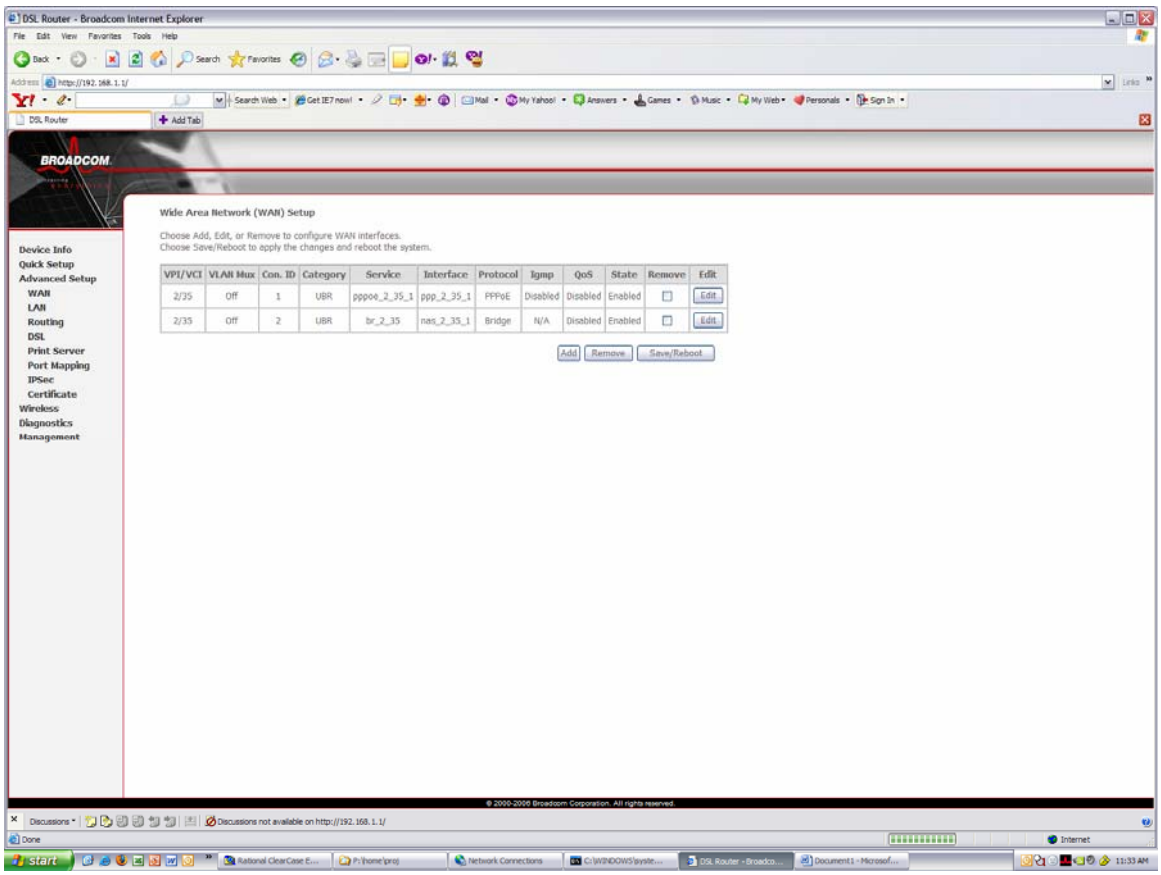
Creating Multi-Service over a PVC is similar to normal service/connection creation procedures. Lets look at a scenario in which 1 PPPoE and 1 Bridge service needed by user. Create a new PPPoE connection on PVC that supports MSP feature. Click on “Advanced Setup” menu button on the left side of the web GUI page and “Add” a PPPoE service. After creating the PPPoE service, the service panel will look as shown below.



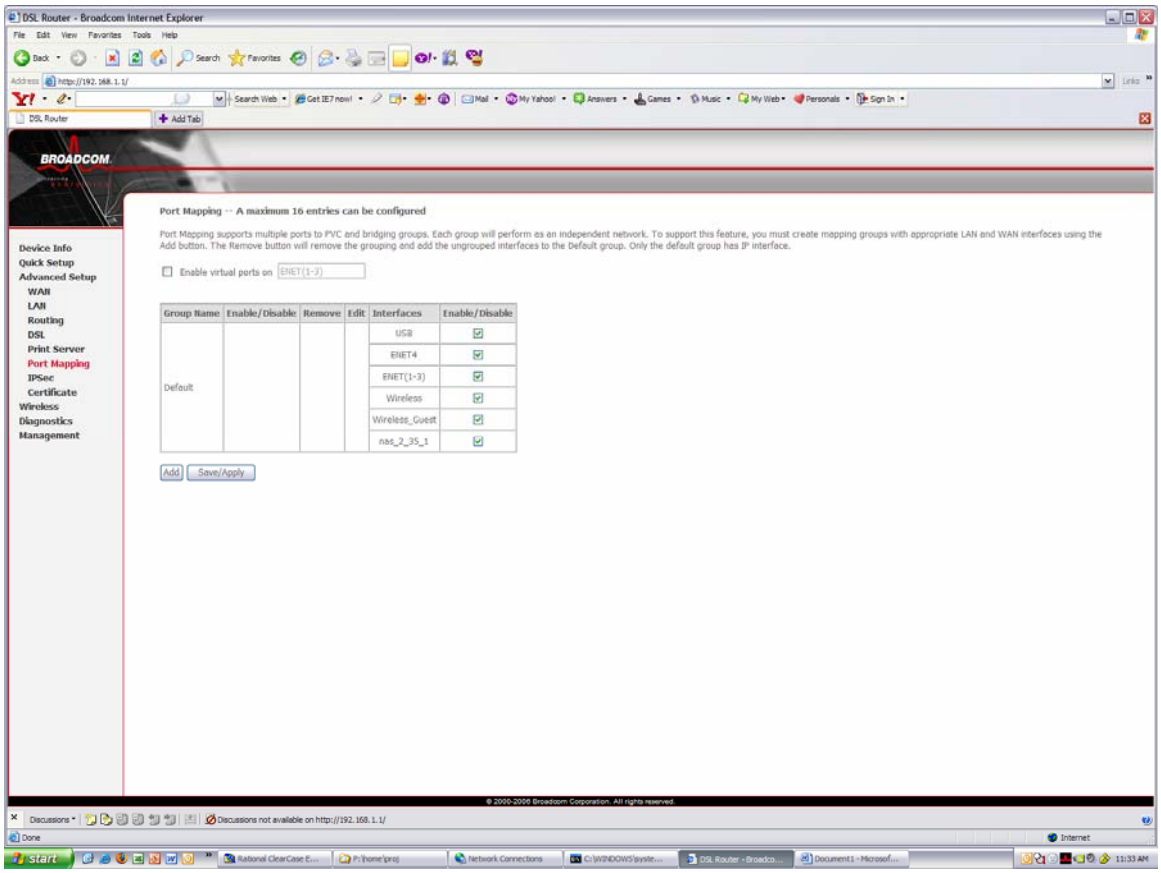
Then, add a bridge PVC service on the same PVC by clicking add service button. Web GUI page will display as shown below. Note PPPoA and IPoA are not available - see next section. It will only allow PPPoE, MER or Bridge service if the user wants to re-use the PVC as these are part of standard RFC2684 encapsulations.



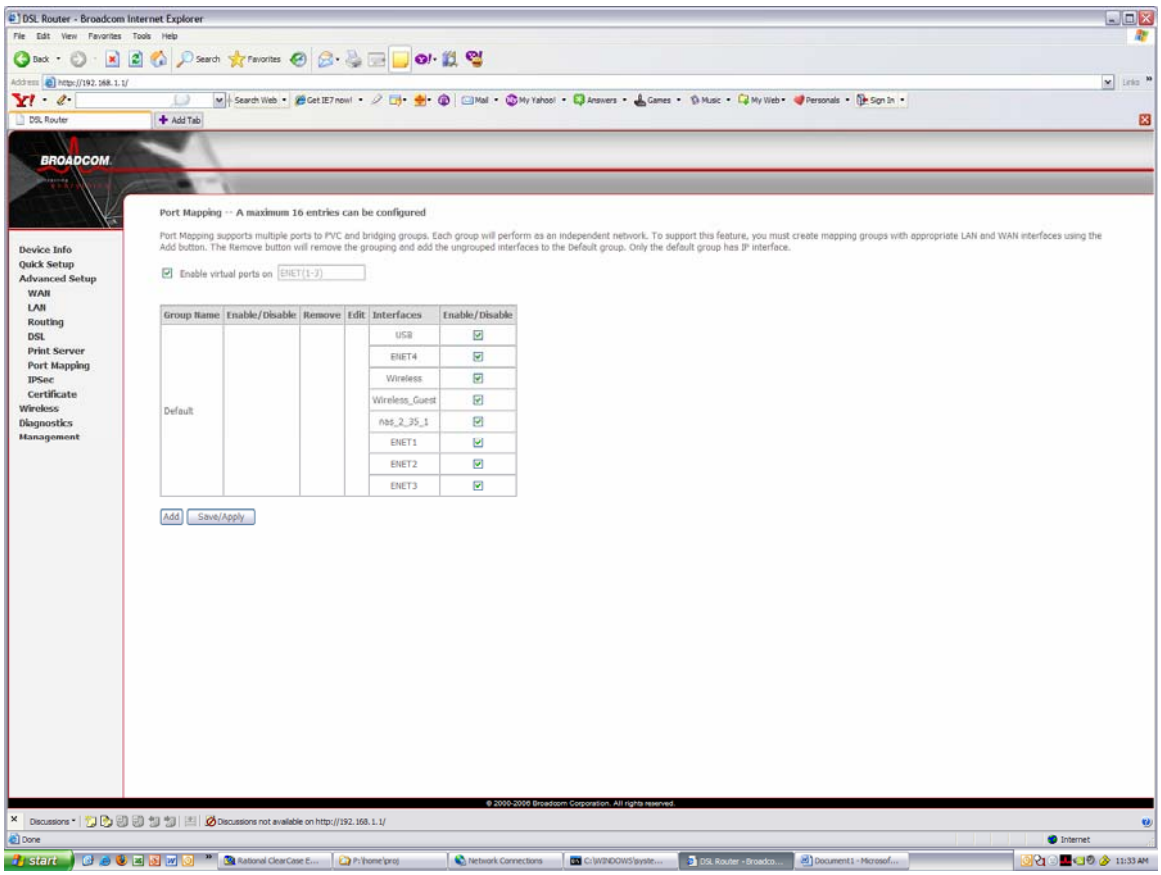
The service panel will be as shown below after a bridge PVC service



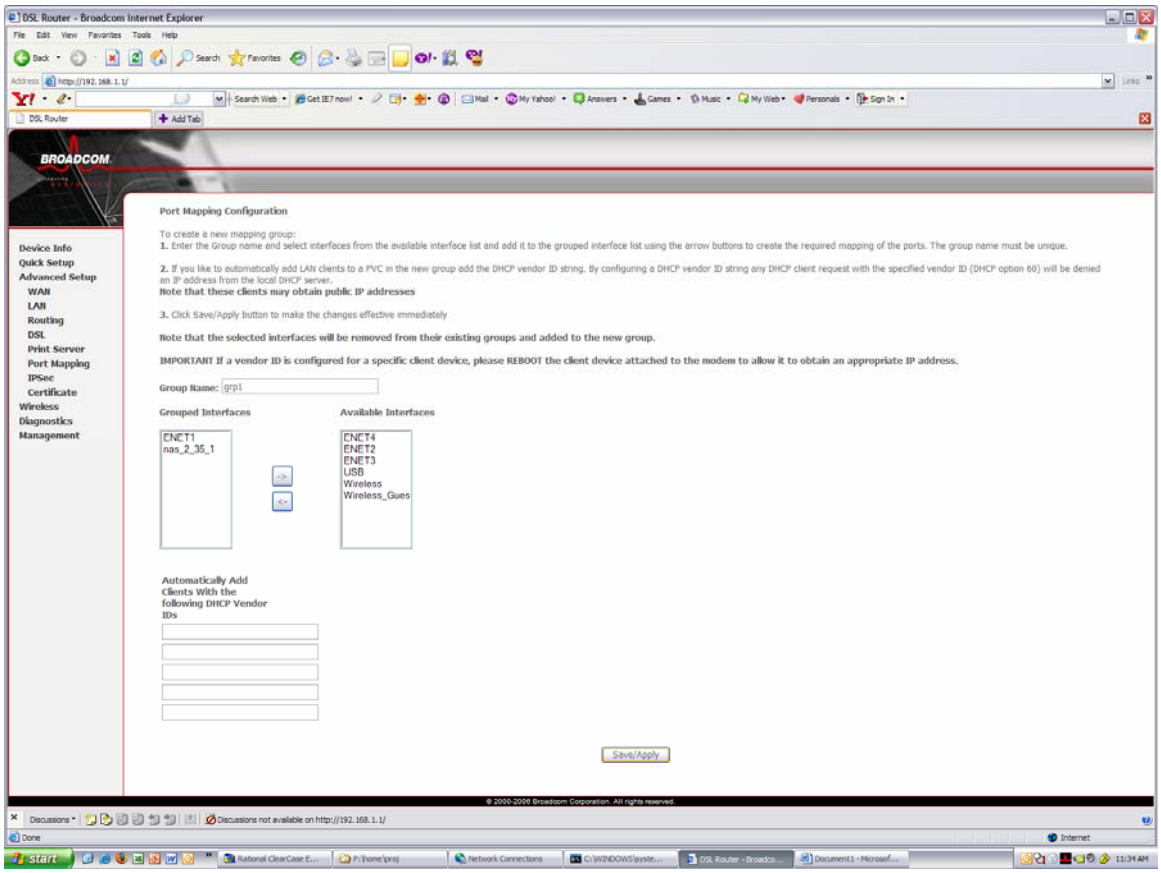
Now, the user needs to configure the port-mapping to map LAN interfaces to WAN interfaces. Click on the "Port Mapping" menu button should display following page on Web GUI



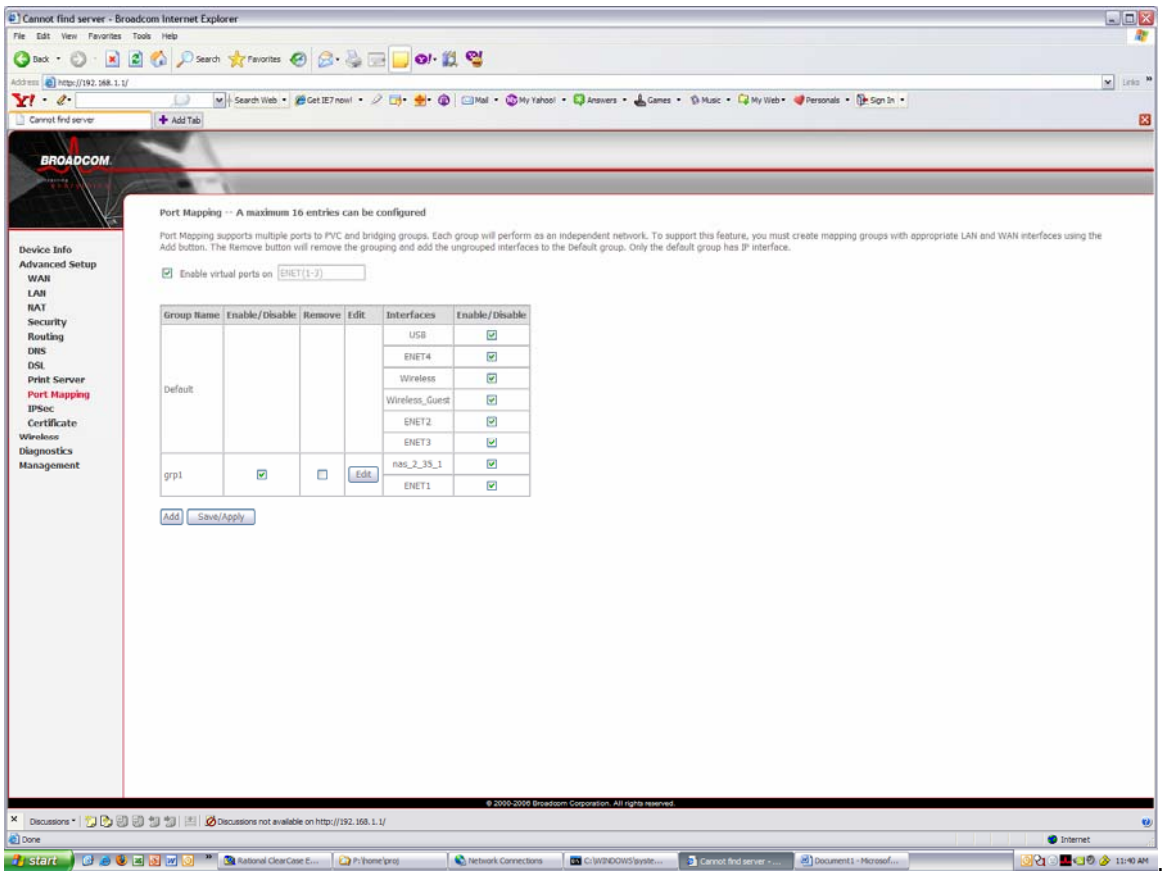
Check on the Enable “Virtual Ports” will result in enabling Ethernet 1-3 virtual ports. The Web GUI will show the successful virtual ports creation as shown below



Now, it's ready to create the port-mapping configuration group. Provide group name, Ethernet port which needs to be part of port mapping group and bridge interface then, click on "Save/Apply" to finish the configuration as shown below.



Once, the port mapping is successfully configured Web GUI page is will be as shown below.



3.0 MSP COMPATIBILITY AND RESTRICTIONS

Multi-Service feature will only work with PPPoE, MER and Bridge as per RFC2684. If the user can configure QoS for the first service on the PVC and QoS is default from next service onwards. If the user wants to delete any MSP service he should completely remove all the services and then re-create as this effects port mapping. Bridge PVC interface is the only interface it will show as part of port mapping configuration.

4.0 INFORMATION ABOUT IMPLEMENTATION

The first WAN PVC interface is named as “nas_2_35” (for pvc 2/35) which is same as single WAN pvc connection. Then, next service onwards the interfaces are named as nas_2_35_1 for 2nd service and nas_2_35_2 for the 3rd service.