Example showing how to configure for 67xxi model phones DHCP for Options 60 and 43 in a Windows environment

Define Vendor Class

Select Define Vendor Class in the drop down list.

| | Display Statistics | |
|---|-------------------------------|---|
| 0 | New Scope | |
| | New Superscope | |
| | New Multicast Scope | |
| 1 | Reconcile <u>All</u> Scopes | |
| | Unauthorize | |
| | Defi <u>n</u> e User Classes | |
| | Define Vendor <u>C</u> lasses | |
| | Set Predefined Options | |
| | All Tas <u>k</u> s | ŀ |
| | ⊻iew | ķ |
| | <u>D</u> elete | |
| | Refresh | |
| | Export List | |
| | Properties | |
| | Help | |

| ew Class Displau n | amer | | | | | | | | | | ? X | |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------------|-----|----------------|
| Aastral P | Phone | 55i | | _ | _ | _ | _ | _ | | | _ | ? |
| D <u>e</u> scriptio | on: | | | | | | | | | | | |
| Aastra S | IP Pho | one 5 | 55i (6 | 755i) | | | | | | | | Add |
| ID: | | | | Binar | y: | | | | | ASCII: | 1 | <u>E</u> dit |
| 0000 0008 0010 | 41 50 | 61 68 | 73 6F | 74 6E | 72 65 | 61 35 | 49 35 | 50 69 | Aas Pho | traIP ne55i | | <u>H</u> emove |
| | | | | | | | | | | | | Close |
| 1 | | | | | | [| | OK | | Cance | el | |

To enter the Vendor Class ID, click on the right side below **ASCII** in the large form field. Enter the Identifier Value from table 7 above. Repeat this step for each phone model that should be served by this DHCP server.

Set Predefined Options

| Eile Action | <u>V</u> iew <u>H</u> elp | | | | |
|--------------------------------|--|------|--|--|---|
| ⇔ ⇒ 🗈 | I × 🗗 D B | 12 | | | |
| | | phon | elab1 [10.105.88.100] | | _ |
| | Display Statistics | | nts of DHCP Server | Status | D |
| | New Scope New Syperscope New Multicast Scope | | pe [10.105.88.0] terminal-lab pe [192.168.50.0] vlan 50 pe [192.168.51.0] vlan 51 pe [192.168.52.0] vlan 52 | ** Active ** ** Active ** ** Active ** ** Active ** | |
| ⊕- <mark>⊆</mark> Sc ⊕- ⊆Sc | <u>B</u> ackup Rest <u>o</u> re | | ver Options | | |
| E Sc Sc | Reconcile <u>All</u> Scopes | | | | |
| | Define User Classes Define Vendor <u>C</u> lasses | | | | |
| | Set Predefined Options. | | | | |
| | All Tas <u>k</u> s | • | | | |
| | ⊻iew | • | | | |
| | Delete Refresh Export List | | | 1 | ħ |
| dd, remove or | Properties | | ed list | | |
| | Help | | | | |

Select Set Predefined Options to get the menu to enter the option 43 data.

Select appropriate option class from the drop down list and press the **Add** button.

| ptio <u>n</u> class: | AastralPPhone | e55i 💌 |
|----------------------|---------------|--------------------------|
| pti <u>o</u> n name: | Add | Edit Delete |
| escription: Value | | |
| | Option Type | |
| | Class: | AastralPPhone55i |
| | <u>N</u> ame: | Configuration Server URL |
| | Data tupe: | String |
| | Dara Abe. | Joung Coox |
| | Code: | 02 |

Example for Configuration server (Sub option 02).

The data in the Option Type menu has to be entered manually: Name: Configuration Server URL Data type: String Code: 02

Create a Vendor class (option 60) for each Aastra model in use. Refer to CPI or admin Guide for corresponding strings. Here it is an example for 6739i model:

| Name | Description | Add |
|--|--|----------------|
| Microsoft Windows 20 Microsoft Windows 98 Microsoft Options Aastra IP-Phone | Microsoft vendor-specific option Microsoft vendor-specific option Microsoft vendor-specific option | Edit Remove |
| tiicssori in∹mone ∖astra6739i | | |
| | | |

| Edit Class | ; | | | | | | | | ? × |
|---|----------------|----------------|----------|----------|----------|----------|----------|----------|----------------------------|
| Display r | name: | | | | | | | | |
| Aastra67 | 739i | | | | | | | | |
| Descripti | on: | | | | | | | | |
| | | | | | | | | | |
| ID: | | | | Binar | γ: | | | | ASCII: |
| 000000000000000000000000000000000000000 | 41 50 39 | 61 68 69 | 73 6F | 74 6E | 72 65 | 61 36 | 49 37 | 50 33 | AastraIP Phone673 9i |
| | | | | | | [| | OK | Cancel |

Configure provisioning sever, if needed:

| Predefined Option | is and Values | ? × |
|-------------------|---------------|----------|
| Option class: | Aastra6739i | • |
| Option name: | 002 Server | • |
| | Add Edit. | . Delete |
| Description: | | |
| _ Value | | |
| String: | | |
| tftp://192.168. | 221.60 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | OK | Cancel |
| | | |

"Add ... " sub-option 08 with

- Data type: "byte" and "array"

| Predefin | ed Options a | nd Values | | ? × |
|----------|--------------|--------------|--------|----------|
| Option o | class: | Aastra6739i | | • |
| Option r | name: | 008 VLAN TAG | i | • |
| | | Add | E dit | Delete o |
| Descrip | tion: | | | |
| Change | e Option Nam | e | | ? × |
| Class: | A | astra6739i | | |
| Name: | | /LAN TAG | | |
| Data ț | ype: | Byte | 🔽 🗹 An | ау |
| Code: | I | 3 | | |
| Descri | iption: | | | |
| | | | OK | Cancel |

"Add..." sub-option 09 with

- Data type: "binary"

| | Predefined Optic | ons and Values | ? × |
|---|------------------|------------------|-----|
| | Option class: | Aastra6739i | - |
| ı | Option name: | 009 VLAN ID | - |
| | | Add Edit Dele | ete |
| ı | Description: | | |
| | Change Option | Name | ? × |
| | Class: | Aastra6739i | |
| | Name: | VLAN ID | |
| | Data type: | Binary 🔽 🗖 Array | |
| | Code: | 9 | |
| | Description: | | |
| | | OK Cano | el |

Configure for sub-option 08:

- On the array enter 16 hexadecimal entries for "Aastra Telecom". For example 0x41, 0x61, 0x73 . . . and so on:

| Marco is unio si li | 100 170 001 7 |
|---------------------------------|----------------|
| Scope Options | ? × |
| Coursel Advanced | |
| | |
| Vendor class: Aastra6739i | <u> </u> |
| User class: Default User Class | • |
| Available Options Description | ▲ |
| 002 Server | |
| ☑ 008 VLAN TAG | |
| | |
| Data Entru Bute | |
| Format: C Desired C Housedarius | |
| | |
| New value: | |
| | A <u>d</u> d |
| <u>C</u> urrent values: | |
| 0x41 | <u>R</u> emove |
| 0x61 | |
| 0x74 | р |
| 0x72 | Down |
| | |
| | |
| OK Car | ncel Apply |
| | |

Configure sub-option 09:

- On the array enter the 4 entries to represent the four bytes of your VLAN ID in HEX. In the example below the VLAN ID is 11 (0x0b)

| Scope Options | | ? × |
|-------------------|--------------------|--------------|
| General Advanced | | |
| Vendor class: | Aastra6739i | |
| User class: | Default User Class | |
| Available Options | Description | |
| 008 VLAN TAG | | |
| ☑ 009 VLAN ID | | |
| | | |
| Data entry | Binaur | ASCIL |
| | 00 0B | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | Cancel Apply |

How it shall look like:

| te DHCP | | | | . e × |
|-------------------------|----------------------------|-----------------|--|-------|
| File Action View Help | | | | |
| * - E 🗉 🗙 📾 | | | | |
| Ф рнср | Scope Options | | | |
| E- reesdc.roes.lab [194 | Option Name | Vendor | Yalue | Class |
| - Scope [102.165 | 2003 Bouter | babact | 192.166.220.222 | None |
| 10 Scope [192.162 | PODE VLAN TAG | Aastra6739i | 0x41, 0x61, 0x73, 0x74, 0x72, 0x61, 0x20, 0x54, 0x65, 0x6c, 0x65, 0x63, 0x6f, 0x6d, 0x20, 0x20 | None |
| ET Scope [192,166 | D09 VLAN ID | Aastra673% | 00 00 00 00 0b | None |
| Address Pos | OCSTAND CONTINUES | Standard | roestab | None |
| Address Let | 4043 Vendor Specific Info | Aastra IP-Phone | OF 41 61 73 74 72 61 20 49 50 2d 50 68 6F 6e 65 01 0d 31 39 32 2e 31 36 38 2e 32 32 31 2e 36 | None |
| E 😹 Reservation | P066 Boot Server Host Name | Standard | 192-168-221.6 | Nore |
| Stope Optx | | | | |
| 🗄 🧰 Scope [192.165 | | | | |
| 🕒 🔛 Scope [192.166 | | | | |
| Server Options | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Here it is an example in a DHCP capture. The Option 43 length is 24 bytes (when only suboptions 8 & 9 are in use, no sub-option 2):

| No, | Time | Source | Destination | Protocol i | Length Info | | |
|----------|-----------------|------------------|----------------------------------|------------|-------------|----------|-----|
| | 5313:50:03.7 | 43908 0.0.0.0 | 255.255.255.255 | DHCP | 341 DHCP | Discover | Tra |
| 1 | | | | | | | |
| | BOUL LITE Halle | not given | | | | | |
| 1 | Magic cookie: | DHCP | | | | | |
| 8 | Option: (53) D | HCP Message Type | | | | | |
| | DHCP: Discov | er (1) | | | | | |
| E I | Option: (57) M | aximum DHCP Mess | age Size | | | | |
| | Length: 2 | | | | | | |
| | Maximum DHCP | Message Size: 1 | 500 | | | | |
| 8 | Option: (55) P | arameter Request | List | | | | |
| | Length: 10 | | | | | | |
| | Parameter Re | quest List Item: | (1) Subnet Mask | | | | |
| | Parameter Re | quest List Item: | (3) Router | | | | |
| | Parameter Re | quest List Item: | (6) Domain Name Server | | | | |
| | Parameter Re | quest List Item: | (42) Network Time Protocol : | Servers | | | |
| | Parameter Re | quest List Item: | (43) Vendor-Specific Information | ation | | | |
| | Parameter Re | quest List Item: | (2) Time Offset | | | | |
| | Parameter Re | quest List Item: | (132) PXE - undefined (vend | or specifi | ic) | | |
| | Parameter Re | quest List Item: | (66) TFTP Server Name | | | | |
| | Parameter Re | quest List Item: | (159) Unassigned | | | | |
| | Parameter Re | quest List Item: | (160) Unassigned | | | | |
| 8 | Option: (12) H | ost Name | | | | | |
| | Length: 17 | | | | | | |
| _ | Host Name: 6 | 739100085D13BA9F | 1.51 | | | | |
| 8. | Option: (60) V | endor class ider | tifier | | | | |
| | Length: 18 | | | | | | |
| | Vendor class | identifier: Aas | tralPPhone6/391 | | | | |
| F | Option: (255) | End | | | | | |
| | option End: | 200 | | | | | |

In DHCP OFFER – Option 43:

2b1808104161737472612054656c65636f6d2020090400000dc

0x2b – Option 43

0x18 - length 24 bytes

0x08 – Sub-option 8

- 0x10 length 16 bytes
- 4161737472612054656c65636f6d2020 string "Aastra Telecom "

0x09 - sub-option 9 (VLAN ID)

- 0x04 length 4 bytes
- 000000DC VLAN ID 220 (0xDC)

| 56 13:50:05.858926 | 192.168.220.222 | 192.168.220.1 | 101 DHCP | 364 DHCP Offer | | | | | | |
|---|---|------------------|----------------------|----------------|--|--|--|--|--|--|
| < [| | | 111 | -L | | | | | | |
| | | | | | | | | | | |
| DHCP: Offer (2) | | | | | | | | | | |
| Option: (1) Subnet Mask | | | | | | | | | | |
| Length: 4 | | | | | | | | | | |
| Subnet Mask: 255.255.0 (255.255.0) | | | | | | | | | | |
| Uption: (58) kenewal lime Value | | | | | | | | | | |
| Ponowal Time Value | Length: 4 Ronowal Time Value: (245600s) 4 days | | | | | | | | | |
| Renewal Lime Value: (3450005) 4 days | | | | | | | | | | |
| length: 4 | | | | | | | | | | |
| Rebinding Time Value: (604800s) 7 days | | | | | | | | | | |
| □ Option: (51) IP Address Lease Time | | | | | | | | | | |
| Length: 4 | | | | | | | | | | |
| IP Address Lease Time: (691200s) 8 days | | | | | | | | | | |
| □ Option: (54) DHCP Server Identifier | | | | | | | | | | |
| Length: 4 | | | | | | | | | | |
| DHCP Server Identifier: 192.168.222.5 (192.168.222.5) | | | | | | | | | | |
| □ Option: (3) Router | | | | | | | | | | |
| Length: 4 | | | | | | | | | | |
| Router: 192.168.220.222 (192.168.220.222) | | | | | | | | | | |
| □ Option: (66) TFTP Server Name | | | | | | | | | | |
| Length: 14 | 102 160 221 6 | | | | | | | | | |
| = Option: (43) Vondon | <u>197.100.771.0</u> Specific Informati | ion | | | | | | | | |
| Length: 24 | spectric informati | | | | | | | | | |
| □ Option: (255) End | | | | | | | | | | |
| Option End: 255 | | | | | | | | | | |
| | | 0 00 00 00 00 | | • • | | | | | | |
| 00c0 00 00 00 00 00 00 | 00 00 00 00 00 0 | 0 00 00 00 00 | | | | | | | | |
| 0000 00 00 00 00 00 00 00 | | 0 00 00 00 00 | ••••• | •• | | | | | | |
| | | | | •• | | | | | | |
| 0100 00 00 00 00 00 00 | 00 00 00 00 00 0 | 0 00 00 00 00 | | | | | | | | |
| 0110 00 00 00 00 00 00 | 63 82 53 63 35 0 | 1 02 01 04 ff | c. Sc5 | •: | | | | | | |
| 0120 ff ff 00 3a 04 00 | 05 46 00 3b 04 0 | 0 09 3a 80 33 | :.F.;: | .3 | | | | | | |
| 0130 04 00 0a 8C 00 30 0140 de 42 0e 31 39 32 | 2e 31 36 38 2e 3 | 2 32 31 20 36 UC | B 192 1 68 221 | | | | | | | |
| 0150 00 2b 18 08 10 41 | <u>61 73 74 72 61 2</u> | 0 54 65 6c 65 | .+Aas tr <u>a Te</u> | le | | | | | | |
| 0160 <u>63 6f 6d 20 20 09</u> | 04 00 00 00 dc f | f | com | | | | | | | |
| | | | | | | | | | | |