Using Busy Lamp Field and Hunt Groups

Engineering Advisory 91820

This Engineering Advisory applies to customers using VVX Business Media Phones on a BroadWorks call control platform. It is intended to provide information and guidance on the best practices for implementing systems where multiple phones are deployed as members of a Hunt Group, or in Busy Lamp Field (BLF) configurations. The document will also provide guidance on recommended limits on call loads and configuration sizes that can be supported.

This engineering advisory applies to the following Polycom phones:

- VVX 300/310, VVX 400/410, VVX 500 and VVX 600 business media phones running UC Software 5.3.0 or later
- VVX Expansion Modules (Color and Paper) running UC Software 5.3.0 or later

Definitions

The following terms are used in this engineering advisory:

- **Busy Lamp Field (BLF)** – The BLF feature allows a user to monitor the status (Active, Ringing or Idle) of remote lines. When a remote phone is ringing, it is possible to pick up that call on behalf of the remote user.
- **Hunt Group** – A group of extensions organized together to process incoming calls.
- **Attendant phone** – A phone that is used to monitor a remote line. In the case where a Hunt Group is combined with BLF, every phone in the Hunt Group becomes an attendant phone.

BLF/Hunt Group Configurations

The following topics answer questions about configuring the BLF and Hunt Group feature.

What does BLF/Hunt Group configuration mean?

Hunt Groups allow a defined group of users to handle incoming calls received by an assigned Hunt Group's phone number. Group administrators can choose from any of the following hunt schemes, each of which rings the specified phones in a different manner:

- Circular - Incoming calls hunt through agents in the order they appear in the list, starting with the agent following the last agent to receive a call. When the search reaches the end of the list, it loops back to the top and continues until it has tried all agents.
- Regular - Incoming calls hunt through agents in the order they appear in the list, starting from the top each time.
- Simultaneous - Incoming calls alert all agents at the same time. The first agent to answer handles the call.

- Uniform - Incoming calls hunt through all agents in order, starting with the agent who has been idle the longest and ending with the agent who most recently answered a call.
- Weighted Call Distribution - Incoming calls are assigned to idle agents based on percentages you assign on the Hunt Group's Profile – Weighted Call Distribution page.

In the context of this document, a BLF/Hunt Group configuration consists of a number of phones deployed on a single network where each phone is a member of the Hunt Group. Each member of the Hunt Group is configured to monitor each other member of the Hunt Group using Busy Lamp Field. When a call comes in, all attendants of the Hunt Group ring, and all BLF displays are triggered to show that all attendants are ringing.

This simultaneous configuration is mainly configured using BroadWorks Call Center to identify the phones in the Hunt Group and the BLF monitoring relationship. The Polycom VVX phones will require some additional set up to configure how the various lines are displayed on the phone UI. See the *Polycom UC Software Administrator Guide* on the Polycom Support for further details on how to set up phones to use BLF.

What does a simultaneous Hunt Group policy look like?

The following figure shows a phone that is monitoring attendant phones in a Hunt Group.

Are there any other specific Hunt Group or BLF configurations that apply?

There are many different call distribution policies that can be set through BroadWorks. For Hunt Groups, there are options such as the ring policy, the number of rings that will occur before a call is offered to the next member of the Hunt Group in addition to call forwarding rules.

On the endpoint, there are also parameters that can be set for BLF and Hunt Groups. For example, you can select different ring types to use when a call to a monitored line alerts an Attendant Phone. For more detail, see the following:

- Using Statically Configured Busy Lamp Field with Polycom SoundPoint IP and VVX Phones (EA 62475)
- Understanding Enhanced BLF on SoundPoint IP Phones (EA 37381)
- Using Polycom VVX Expansion Modules with Polycom VVX Business Media Phones (Feature Profile 78960)

Limitations on BLF/Hunt Group Configurations

The following sections lists possible limitations when using and configuring BLF and Hunt Groups.

Are there any limits on BLF/Hunt Group Configurations?

There is a limit of 50 BLF lines that can be supported in BroadWorks R19, which also sets the limit permitted to be added to a VVX phone.

Can all VVX Business Media Phones handle 50 BLF lines out of the box?

Due to screen limitations of the phone hardware, there are limits on the number of BLF lines that can be monitored, depending on the phone model. These limits are purely a factor of the number of physical line keys available on each phone. If more than the maximum number of lines is configured, the phone will not monitor those additional lines. To reach the maximum of 50 BLF lines, expansion modules must be attached to the phone.

Limitation of the Display of BLF Monitoring Lines

Polycom Phone Model	*Limitation on BLF Monitoring Lines*
VVX 300/310	5
VVX 400/410	11
VVX 500	11
VVX 600	15

Can I use Expansion Modules with VVX 300/400 in addition to VVX 500/600 for monitoring BLF lines?

Yes, when not configured in a BLF/Hunt Group, all VVX phones can support up to three VVX Expansion Modules (Color or Paper), and can monitor up to 50 BLF lines.

Are there limits to the number of phones in a Hunt Group?

While there are generally no limits to the number of phones in a standard Hunt Group, there are limits based on a phone's ability to handle the load generated by this configuration, especially when using a simultaneous distribution policy. Generally, the more powerful the phone, the larger the BLF/Hunt Group can be.

Note that the expected call load will also have an impact. The higher the expected number of incoming calls to a BLF/Hunt Group within a fixed timeframe, the greater the risk of unwanted behavior.

Recommended Limit to BLF/Hunt Group Size in Moderate Call Load Scenarios

Polycom Phone Model	*Recommended Hunt Group Size (No connected expansion module)*	*Recommended Hunt Group Size (No connected expansion module) UC Software 5.3.0*
VVX 300/310	3	5
VVX 400/410	7	11
VVX 500	11	11
VVX 600	15	15

Can I use Expansion Modules (EM) in a BLF/Hunt Group configuration to monitor more lines?

Yes, while it is possible to attach expansion modules to increase the size of the Hunt Group that can be monitored, Polycom strongly recommends that Expansion Modules are used in this configuration only when attached to either VVX 500 or VVX 600 phones.

As can be seen from the table, there is no increase in recommended size of the configuration for VVX 300/400 phones. Remember that call loads also impact the behavior of phones.

Recommended Limits to BLF/Hunt Group Size in Moderate Call Load Scenarios with Expansion Modules

Polycom Phone Model	*Recommended Hunt Group Size (with connected expansion module)*	*Recommended Hunt Group Size (with connected expansion module) UC Software5.3.0*
VVX 300/310	3	24
VVX 400/410	5	24
VVX 500	35	40
VVX 600	35	40

What will happen if I exceed the recommended size?

To a great extent, that will depend on the call load. For example, if the load is small, one or two calls a minute, it is likely that no adverse impacts will be observed. As the load increases to multiple calls every 2-4 seconds (moderate load), the phones may begin to have problems managing the load. Common indications of this include “stuck” BLF statuses and missed call alerting. The network will also begin to be impacted when a large number of incoming calls at a high rate is directed to a large BLF/Hunt Group.

What is my alternative to using a simultaneous configuration?

Shared Call Appearances (SCA) can achieve a very similar solution where there is a need for multiple phones to monitor incoming calls.

Alternatively, the Group Policy while configuring Hunt Group can be set to Weighed Call Distribution, Uniform, Circular or Regular instead of Simultaneous to alleviate load on the Call Center system.

Customer Feedback

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