Best Practices for Optimizer Partitions and Preferences

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The Optimizer finds appropriate placements for all your classes based on your departments' preferences and needs, but it can only do its best with what it's given. This page will walk you through the process of setting up your locations and organizations to accurately reflect your scheduling priorities.
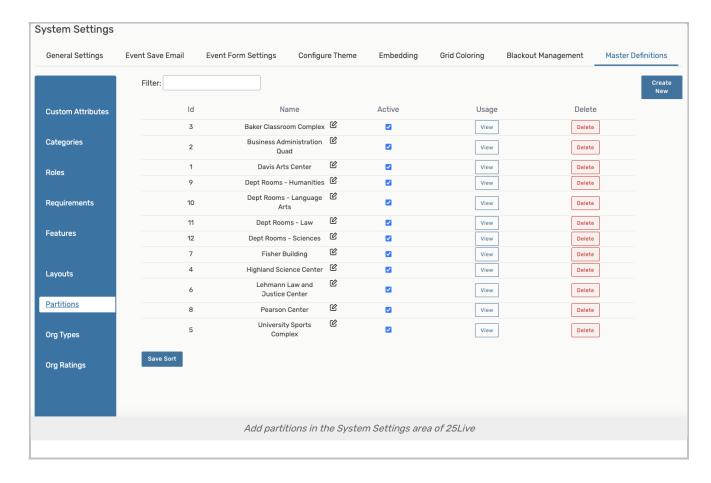
For background, please see the following articles:

- Optimizer Setup for a list of all fields used by the Optimizer
- How the Optimizer Uses Partitions and Preferences for an explanation of the Optimizer's placement priorities

Location Partitions

Partitions represent groups of locations on your campus, usually grouped by geographic area. Partitions are mutually exclusive: a location can't be in more than one. All locations *must* have a partition in order to be used with the Optimizer. (Don't add partitions to locations which won't be used this way.)

Once you've created your partitions in the System Settings area of 25Live, you can add them to your locations in the Organization Details view. You can also upload them from a spreadsheet with the Series25 Data Import Tool .

System Settings

General Settings | Event Save Email | Event Form Settings | Configure Theme | Embedding | Grid Coloring | Blackout Management | **Master Definitions**

Filter: [   ]   [Create New]

Custom Attributes

Categories

Roles

Requirements

Features

Layouts

Partitions

Org Types

Org Ratings

Id	Name	Active	Usage	Delete
3	Baker Classroom Complex	☑	View	Delete
2	Business Administration Quad	☑	View	Delete
1	Davis Arts Center	☑	View	Delete
9	Dept Rooms – Humanities	☑	View	Delete
10	Dept Rooms – Language Arts	☑	View	Delete
11	Dept Rooms – Law	☑	View	Delete
12	Dept Rooms – Sciences	☑	View	Delete
7	Fisher Building	☑	View	Delete
4	Highland Science Center	☑	View	Delete
6	Lehmann Law and Justice Center	☑	View	Delete
8	Pearson Center	☑	View	Delete
5	University Sports Complex	☑	View	Delete

[Save Sort]

Add partitions in the System Settings area of 25Live

How Big Should Partitions Be?

The first question to ask when setting up your partitions is how granular you want to be. The scope of each partition can be as broad or as narrow as you require. The smaller your partitions (i.e., the fewer locations they represent) the more fine-grained your Optimizer preferences can be. But, this also increases your administrative overhead as well as potentially can impact Optimizer performance. If departments' preferences are too specific, you may get worse placement and utilization as the Optimizer strives to make them happy.

If you create large partitions and don't set up complicated preference hierarchies, the Optimizer will have fewer restrictions and can place classes in the best possible arrangement to maximize utilization.

✓ **Tips For Defining Partitions**

- **Start with buildings.** Make the "basic unit" for partitions a single building. You can make them smaller or larger as needed, but that's a good starting point.

- **Only add partitions to locations that need them.** If a location will never be assigned by the Optimizer, don't add a partition. For example, if your Biology labs are always manually assigned to classes, there's no need to add them to a partition (even if you have a partition for Biology Building classrooms). The Optimizer can't assign a location that has no partition.

- **Use clear naming conventions.** If you have a multi-campus institution and need multiple partitions at each campus, include the campus name in the partition label (for example, "Main - Baker Classroom Complex" and "Tigard - Biology Building"). Doing this makes it much easier to identify the campus when selecting from a list.

- **Don't design partitions for use as search categories.** If you need a clear and convenient way to identify what's in a specific building or another part of campus, use Location Categories for this purpose instead. Partitions are most appropriately used by the Optimizer algorithm for targeted placement, not 25Live searches.

Note: Creating partitions for a decentralized scheduling environment

If all or most of your classrooms are "owned" by colleges or departments, you may want to create partitions based on that, such as:

- English Classrooms
- Math Classrooms
- Business Admin Classrooms
- General Assignment Classrooms

When setting up partition preferences on organizations (see below) you would put each department's spaces as their first preference, followed by the General Assignment partition (which includes any rooms that are centrally controlled). This would prioritize departments' placement into their own rooms while keeping them out of other territories.

Organization Partition Preferences

Once your partitions are set up and added to locations, your next task is to use them for organization preferences. Each organization (representing a department or subject code) has its own set of preferences that indicate where its sections will be placed. For example, the MATH organization might want its classes held in the Morris Building as a first choice, then in either the Vollum or Garrison buildings, but never in the Learning Complex.

Partition preferences boil down to a few key facts:

- Organizations rank their desired partitions from 1-4, with 1 being the first choice. Multiple partitions can hold the same ranking.
- The Optimizer will only place a section in a lower-ranked partition if there are no available rooms in a "better" partition.
- If an organization does not rank a given partition at all, the Optimizer will never place its classes there.
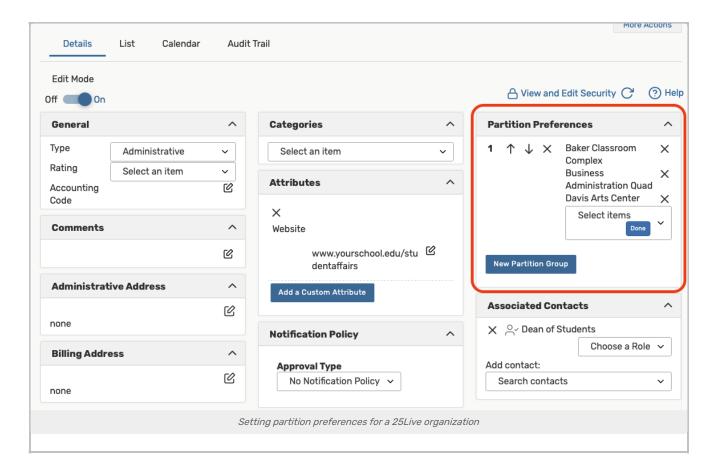
Best Practice: "Last Choice" Preferences

Because the Optimizer won't place a section in a location outside its organization's partition preferences, it's wise to use the lowest priority preference group for "last choice" placement options.

This includes all partitions where instructors would really rather not teach, but would accept if there were no other option. (After all, it's better to have a bad classroom than no classroom at all!)

Setting Preferences in 25Live

To edit an organization's preferences in 25Live, go to the Organization Details view. Use the search to select and add and the arrows to set order.

Setting partition preferences for a 25Live organization

Uploading Preferences as a Spreadsheet

You can also record your partition preferences in a spreadsheet and upload them all at once using the Series25 Data Import Tool. This is a great way to manage your rankings quickly and effectively.

1. Download the Preferences File

- Start by downloading the **preferences.xml** template from the Data Import Tool.

2. Edit the File

- Do not alter the names of the columns or tabs in this spreadsheet.

- On each line, write down an organization's name, a partition you wish to rank, and the level to rank it at. (1 is best, 4 is worst)

   - Organization and partition names must be an **exact match** with what's in 25Live.

   - Only write one organization and partition per line. (This will make your spreadsheet very long. If you have 100 organizations and 10 partitions, it could be up to 1000 lines!)

   - Do not "skip" rankings; for example ranking partitions at 1, 2, 4 but none at 3.

   - See Importing Organization Partition Preferences for detailed instructions, including a shortcut that will let you specify "all partitions" for a given ranking rather than needing to list them out individually.

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3. Upload the File

- When the file is complete, upload it using the Data Import Tool.
- Spot-check a few organizations in 25Live (see above) to confirm that their partitions are listed the way you want.
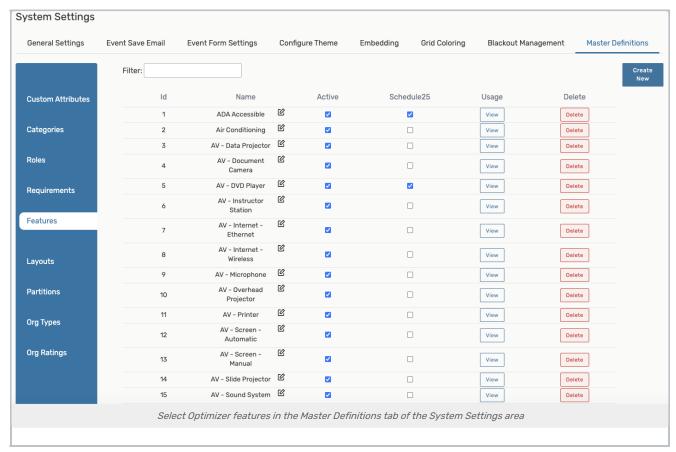
Location Features

Location features represent fixed, permanent components of a location, including physical equipment (such as a data projector), inherent qualities (such as east-facing windows), or other amenities (such as accessibility options). The Optimizer uses location features to match locations to sections with specific needs.

Partition preferences are required for the Optimizer to function, but location feature preferences are optional.

Once you've created your features in the System Settings area of 25Live, you can add them to your locations in the Location Details view. You can also upload them from a spreadsheet with the Series25 Data Import Tool.

Because features also have uses beyond the Optimizer, your list of features will probably include some things that aren't relevant to classroom placement. Specify the features that you want to use with the Optimizer by checking the Schedule25 box. All unchecked features will be ignored.

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Filter: [_____]

Create New

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Org Ratings

Id	Name		Active	Schedule25	Usage	Delete
1	ADA Accessible	✎	☑	☑	View	Delete
2	Air Conditioning	✎	☑	☐	View	Delete
3	AV - Data Projector	✎	☑	☐	View	Delete
4	AV - Document Camera	✎	☑	☐	View	Delete
5	AV - DVD Player	✎	☑	☑	View	Delete
6	AV - Instructor Station	✎	☑	☐	View	Delete
7	AV - Internet - Ethernet	✎	☑	☐	View	Delete
8	AV - Internet - Wireless	✎	☑	☐	View	Delete
9	AV - Microphone	✎	☑	☐	View	Delete
10	AV - Overhead Projector	✎	☑	☐	View	Delete
11	AV - Printer	✎	☑	☐	View	Delete
12	AV - Screen - Automatic	✎	☑	☐	View	Delete
13	AV - Screen - Manual	✎	☑	☐	View	Delete
14	AV - Slide Projector	✎	☑	☐	View	Delete
15	AV - Sound System	✎	☑	☐	View	Delete

Select Optimizer features in the Master Definitions tab of the System Settings area

Matching Features to your SIS

Features are added to sections in your student information system and imported through LYNX. Be sure to set up your translation tables so that your SIS data matches your 25Live data.

The specific type of data added to sections in your SIS depends on the platform you use:

- **Banner**: Room Attribute Descriptions
- **Campus Solutions**: Room Characteristic Descriptions
- **Colleague**: Classroom Equipment Codes
- **Other**: Any appropriate field available in your SIS (preferably one that is part of the meeting pattern itself)