

## Ring Accumulation Basics & Configuration

SpatialKey's dynamic ring model has 2 basic types: Magic Ring or Target analysis.

1. The Magic Ring uses a spider approach that applies dozens of rings (or concentric rings) that run along a grid to calculate your peak accumulation within a chosen radius—including a ring centered around the prospective risk. Those rings are deduplicated and narrowed down, leaving one worst-case ring for each schedule location. The resulting ring is determined by calculating the greatest exposure from the schedule and portfolio locations that fall within it.
2. The Target analysis centers a ring (or concentric rings) on the schedule locations and returns your exposure from the schedule and portfolio locations that fall within it.

## Configuration

Models are configurable by the following:

- **Peril/Title:** Terrorism or Flood are the most common
- **Magic Ring and/or Target Analysis:** The magic ring runs a spider analysis whereas the target ring centers the ring (or concentric rings) on the schedule locations.
  - **% Ring Overlap:** For the magic ring options, the default ring overlap is 12.5% but can be adjusted to 25%.
- **Radius:** Single or up to three concentric rings
- **Damage factor** on each ring. Default is 100%
- **Global Capacity Threshold** for exposed limit to see an over/under flag in the report (optional)



**TIP!** You can run an analysis against your prospective risk alone or against new risks AND in-force portfolio. The model can also take policy terms and facultative reinsurance into consideration. The analysis degrades gracefully depending on how much information the user has given.

SpatialKey | Underwriting
993 Park Ave, New York, NY 10028

Summary Report
Map

**Location Report**

993 Park Ave, New York, NY 10028  
 TIV: \$5M  
 Manually Geo-corrected  
 Lat: 40.771666, Long: -73.964557

**Terrorism Accumulation**

Peak Accumulation in 200/400/500 m Over 50m Threshold

|              | # of Loc  | Ground Up         | Gross             | Net               |
|--------------|-----------|-------------------|-------------------|-------------------|
| New          | 1         | 5,000,000         | 5,000,000         | 5,000,000         |
| Portfolio    | 12        | 48,000,000        | 48,000,000        | 48,000,000        |
| <b>Total</b> | <b>13</b> | <b>53,000,000</b> | <b>53,000,000</b> | <b>53,000,000</b> |

SpatialKey | Underwriting
6932 Juniper Ct, Arvada, CO

Summary Report
Map

**Location Report**

6932 Juniper Ct, Arvada, CO  
 TIV: \$5M  
 Manually Geo-corrected  
 Lat: 40.771666, Long: -73.964557

**Flood Accumulation**

Target Accumulation in 250 m Under 10m Threshold

|              | # of Loc  | Ground Up        | Ground Up        | Ground Up        |
|--------------|-----------|------------------|------------------|------------------|
| New          | 1         | 500,000          | 500,000          | 500,000          |
| Portfolio    | 12        | 2,500,000        | 2,500,000        | 2,500,000        |
| <b>Total</b> | <b>13</b> | <b>2,700,000</b> | <b>2,700,000</b> | <b>2,700,000</b> |

## How to run a Ring Accumulation

As submissions come to your desk, use Underwriting Ring Accumulations to analyze whether adding them to your book of business will create adverse concentrations of risk.

1. Enter a **single address or multiple addresses**.
2. Or **upload a schedule of locations** that has been prepared.
3. Optional: **Enter insured values (TIV)** for the data you want to analyze. When uploading a schedule, you will be able to select a column that represents insured value.
4. Optional: **Enter policy terms** for the prospective risk(s) you are evaluating.
5. Optional: **Select in-force portfolio** to understand the impact of adding the new location(s) to existing concentrations

The screenshot displays the SpatialKey Underwriting interface. On the left, a sidebar contains the 'Enter Locations' section with a search bar (1) and a list of confirmed locations (3). The main area shows an aerial map with a location pin (2). A 'Review Analysis Options' dialog is open, showing 'Schedule Policy Terms' (4) and 'Portfolio' (5) settings. A 'Schedule Policy Terms' dialog is also open, showing input fields for limit, layer, attachment point, and deductibles.

**TIP!** The more financial information you can provide, the more accurate your exposure calculation will be. Don't know the financials yet? The analysis will still provide the best look at your exposure and degrade gracefully depending on how much information you've entered.

## Visualize and understand results

1. If you ran more than 1 location in your analysis, you'll initially see a summary of your schedule based on whether the new locations added enough exposure to existing concentrations to go over the threshold set for your organization. This view provides a high-level look at where to focus your analysis.
2. Use the map to visualize schedule locations, colored by over/under your threshold.
3. Click the report icon in each row or on the location point on the map to dive into each schedule location and see a zoomed in view of the accumulation along with a detailed list of all the locations, and your total exposure.
4. Each schedule location will display a detailed table reporting total exposure for all locations that fell within the ring broken down by new schedule locations and in force portfolio locations.
5. Export a CSV list of the locations that fell in the ring along with your total exposure.

**Screenshot 1: Summary Report**  
 Schedule: 4 locations, 4/06/22, 11:45am  
 Terrorism Accumulation  
 Peak Accumulation 50m in 200/400/500 m  
 1 Location Over 50m Threshold, 3 Locations Under 50m Threshold

**Screenshot 2: Map View**  
 Shows a map of New York City with 3 locations marked. A sidebar on the right shows a table of locations with columns for Tab Label, Tab Label, and Location.

| Tab Label                          | Tab Label | Location                            |
|------------------------------------|-----------|-------------------------------------|
| Peak Accumulation in 200/400/500 m |           |                                     |
| Overall Risk                       | T         | Street                              |
| Over 50m Threshold                 |           | 993 Park Ave, New York, NY 10028    |
| Under 50m Threshold                |           | 6932 Juniper Ct, New York, NY 10028 |
| Under 50m Threshold                |           | 1243 Martin Rd, New York, NY 10028  |
| Under 50m Threshold                |           | 4315 Main St, New York, NY 10028    |

**Screenshot 3: Zoomed-in Map**  
 Shows a zoomed-in view of a location with a red ring indicating the 50m threshold. A sidebar on the right shows a table of locations with columns for Tab Label, Tab Label, and Location.

| Tab Label                          | Tab Label | Location                            |
|------------------------------------|-----------|-------------------------------------|
| Peak Accumulation in 200/400/500 m |           |                                     |
| Overall Risk                       | T         | Street                              |
| Over 50m Threshold                 |           | 993 Park Ave, New York, NY 10028    |
| Under 50m Threshold                |           | 6932 Juniper Ct, New York, NY 10028 |
| Under 50m Threshold                |           | 1243 Martin Rd, New York, NY 10028  |
| Under 50m Threshold                |           | 4315 Main St, New York, NY 10028    |

**Screenshot 4: Location Report**  
 Location Report for 993 Park Ave, New York, NY 10028  
 Peak Accumulation in 200/400/500 m: Over 50m Threshold

|           | # of Loc. | Ground Up  | Gross      | Net        |
|-----------|-----------|------------|------------|------------|
| New       | 1         | 5,000,000  | 5,000,000  | 5,000,000  |
| Portfolio | 12        | 48,000,000 | 48,000,000 | 48,000,000 |
| Total     | 13        | 53,000,000 | 53,000,000 | 53,000,000 |

**Screenshot 5: Detailed Table**  
 993 Park Ave, New York, NY 10028  
 Peak Accumulation in 200/400/500 m: Over 50m Threshold

| Type | Ring | Address         | City     | Latitude  | Longitude   | TV   | Acctgroup |
|------|------|-----------------|----------|-----------|-------------|------|-----------|
| 1    | 500m | 993 Park Ave    | New York | 39.827552 | -105.161274 | SM   | 245245    |
| 2    | 500m | 6932 Juniper Ct | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 3    | 300m | 1243 Martin Rd  | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 4    | 300m | 4524 Beach Ct   | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 5    | 300m | 6932 Juniper Ct | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 6    | 300m | 1243 Martin Rd  | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 7    | 300m | 4524 Beach Ct   | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 8    | 100m | 6932 Juniper Ct | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 9    | 100m | 1243 Martin Rd  | New York | 39.827552 | -105.161274 | S00A | 23423     |
| 10   | 100m | 4524 Beach Ct   | New York | 39.827552 | -105.161274 | S00A | 23423     |

**TIP!** Results can also be returned via API