SSRS Advanced Features – Grouping, Lists, Visualizations, Sub-Reports, Maps & Deployment

# SSRS Advanced Features – Grouping, Lists, Visualizations, Sub-Reports, Maps & Deployment

## 1. Advanced Grouping and Toggle Visibility

### Concept

- Grouping allows you to organize data into logical sections.

- Toggle visibility creates an expand/collapse (+/-) experience similar to Excel pivot tables.

### Steps – Creating Toggle Visibility in Groups

1. Create a Matrix or Table report.

2. Group rows/columns based on a field (e.g., Name or CountryRegionCode).

3. Right-click the group → Group Properties.

4. Go to Visibility:

- Select Hide by default.

- Enable Display can be toggled by this report item → select the parent field (e.g., Name).

5. Preview report:

- You’ll see + signs to expand/collapse grouped rows or columns.

\*\*Use Case Example\*\*:

- CountryRegionCode as a parent group with SalesYTD details hidden by default.

- Expand country to view each territory’s sales.

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## 2. Using Lists in SSRS

### Purpose

- Lists provide a template layout repeated for each dataset row/group.

- Fully customizable — can include text boxes, rectangles, charts, images, sub-reports, etc.

### Steps to Create a List

1. Insert List control from Toolbox.

2. Assign Dataset to the list.

3. Set grouping:

- Right-click list → Group Properties → Group on field (e.g., TerritoryID).

4. Add content inside list:

- Text box for field labels & values.

- Rectangles for background styling.

- Tables, matrices, or charts for related details.

5. Format for readability (fonts, colors, alignment).

\*\*Example\*\*:

- A Scorecard report where each list section contains performance data for one employee, formatted for printing.

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## 3. Combining Lists with Other Controls

- Inside a list, you can insert:

- Matrix/Table for detail rows.

- Charts for graphical summaries.

- Images for branding or employee pictures.

- Each list section becomes a mini-dashboard for a single data group.

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## 4. Visualization in SSRS

### Available Chart Types

- Bar, Column, Line, Area, Pie, Scatter, Gauge, Sparkline.

- Supports 2D & 3D rendering.

### Example – Creating a Bar Chart

1. Insert chart → Select Bar Chart.

2. Assign Dataset.

3. Set Category Groups (X-axis) → e.g., CountryRegionCode.

4. Set Values (Y-axis) → e.g., SalesYTD.

5. Format:

- Change axis properties to currency (Vertical Axis Properties → Number → Currency).

- Add data labels for readability.

\*\*Example – Creating a Pie Chart\*\*

- Category Group → Group field.

- Values → SalesYTD.

- Add data labels to show percentages or actual values.

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## 5. Sub-Reports in SSRS

### Concept

- A sub-report is a report embedded inside another report (like an HTML iframe).

- Used for drill-down, detail-on-demand, or modular report design.

### Steps – Creating Parent & Sub-Report

1. Create Sub-Report:

- Dataset with a parameter (e.g., WHERE CountryRegionCode = @CountryRegionCode).

- Table or Matrix to display filtered data.

2. Create Parent Report:

- Dataset listing higher-level items (e.g., list of countries).

- Insert a Sub-Report control.

- Set Sub-Report properties:

- Link to sub-report name.

- Pass parent field as parameter.

3. Preview:

- For each parent row, the sub-report displays related details.

\*\*Use Case\*\*:

- Parent: Countries list.

- Sub-Report: Territory and sales breakdown for selected country.

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## 6. Maps in SSRS

### Purpose

- Visualize spatial/geographic data using Map Control.

- Supports integration with Bing Maps or custom shapefiles (.shp).

### Steps – Creating a Map

1. Create Dataset with spatial data (e.g., geography type in SQL Server).

2. Insert Map from Toolbox.

3. Choose:

- Map Gallery (preloaded USA/world maps).

- ESRI Shapefile (custom map regions).

- SQL Server spatial query.

4. Assign Dataset and spatial field.

5. Optionally add Bing Maps layer for satellite/road imagery.

6. Choose visualization type:

- Basic marker map.

- Bubble map (size based on data value).

- Color-coded polygons.

\*\*Example\*\*:

- Map with store locations as pushpins.

- Color intensity based on sales performance.

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## 7. Deployment of SSRS Reports

### Configuring Target Server

- Right-click Solution → Properties.

- Set TargetServerURL:

- Local: http://localhost/ReportServer or http://localhost/ReportServer\_INSTANCE

- Remote: http://<serverName>/ReportServer

### Deployment Steps

1. Deploy Shared Data Sources first.

2. Deploy reports.

3. Verify in Web Portal (http://localhost/Reports).

4. Manage in portal:

- Create folders.

- Set permissions.

- Share URLs with users.

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## 8. Tips & Best Practices

- Use Shared Data Sources for consistency across reports.

- Apply parameters to create dynamic filtering and drill-down experiences.

- Combine lists, charts, and sub-reports for dashboard-style reporting.

- For large datasets, leverage server-side filtering in SQL.

- Optimize performance with report caching and snapshots.