Autonomic SLA Management as a Service

| PhD Project Plan   |               | $\vdash$    |            |                           | 2012                                 |  |                              | 2013         |                                     |                                  |                  | _                                   |               | _             | 20                          | 2014         | _                                   | _               |                  |                  | -               | -                                 |                | 2015        |              |             |                                     |
|--|---------------|-------------|------------|---------------------------|--------------------------------------|--|------------------------------|--------------|-------------------------------------|----------------------------------|------------------|-------------------------------------|---------------|---------------|-----------------------------|--------------|-------------------------------------|-----------------|------------------|------------------|-----------------|-----------------------------------|----------------|-------------|--------------|-------------|-------------------------------------|
| Project Task (months)  Duration (months)   | Start         | Start       | nii.       | Finish<br>October 1, 2012 | November 1, 2012<br>December 1, 2012 | January 1, 2013 February 1, 2013 March 1, 2013 | April 1, 2013<br>May 1, 2013 | July 1, 2013 | August 1, 2013<br>September 1, 2013 | October 1, 2013 November 1, 2013 | December 1, 2013 | January 1, 2014<br>February 1, 2014 | March 1, 2014 | 4102 ,1 lingA | May 1, 2014<br>June 1, 2014 | July 1, 2014 | August 1, 2014<br>September 1, 2014 | October 1, 2014 | November 1, 2014 | December 1, 2014 | January 1, 2015 | February 1, 2015<br>March 1, 2015 | \$102 ,1 lingA | May 1, 2015 | June 1, 2015 | 5102 ,1 չևՍ | August 1, 2015<br>September 1, 2015 |
| Literature Review and Analysis of SLAs, KPIs and QoS 4 October-12 Janua for Cloud Computing. | 4 October-12  | October-12  | Janua      | January-13                |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Review on established SLAs, SLOs and KPI.  |               |             |            |                           | •                                    |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Generate a Frame-SLA guideline document for Cloud Computing.                                 |               |             |            |                           | •                                    |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Literature report on current state of the art SLAs for Cloud Computing.                      | Jond          |             |            |                           | •                                    |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Journal/Conference Paper   |               |             |            |                           |                                      | •  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Analysis of Cloud-, VM-, and Monitoring Interfaces 3 February-13 April-13                    | 3 February-13 | February-13 | April-     | 13                        |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Definition of SLA management interfaces  |               |             |            |                           |                                      | <b>*</b>                                       |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Research on QoS management interfaces  |               |             |            |                           |                                      |  | •                            |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Research in the Specification and Extension of SLA & 3 May-13 July-13 SLO Languages          | 3 May-13      | May-13      | July-1     | 3                         |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Journal/Conference Paper   |               |             |            |                           |                                      |  |                              | <b>♦</b>     |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Analysis of QoS Monitoring & SLA Compliance and 8 August-13 March-14 Management              | 8 August-13   | August-13   | Marc       | h-14                      |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Identify monitoring agents & interfaces  |               |             |            |                           |                                      |  |                              |              |                                     | •                                |                  |                                     |               |               |                             | П            |                                     |                 |                  |                  |                 |                                   |                |             |              | П           | Н                                   |
| Investigate additional information gathering agents  |               |             |            |                           |                                      |  |                              |              |                                     |                                  |                  | •                                   |               |               |                             |              | Н                                   | Ц               |                  |                  |                 |                                   |                |             |              |             | П                                   |
| RDC.2  |               |             |            |                           |                                      |  |                              |              |                                     |                                  |                  |                                     | •             | _             |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Architecture for Autonomic SLA Management 5 April-14 August-14                               | April-14      | April-14    | August     | -14                       |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Architecture specification   |               |             |            |                           |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               | •                           |              |                                     | 4               |                  |                  |                 |                                   |                |             |              |             | $\dashv$                            |
| Journal/Conference Paper   |               |             |            |                           |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 | _                | •                |                 |                                   |                |             |              |             | $\dashv$                            |
| Development of the SLA-Management and SLA- Admitsion Protection  July-14  May-15             | July-14       | July-14     | May-15     |                           |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              |                                     |                 |                  |                  |                 |                                   |                |             |              |             |                                     |
| Auditation 1 receipte  |               |             |            | +                         | +                                    | †<br>†   | +                            | +            | +                                   | 1                                | 1                | $\frac{1}{1}$                       | 1             | +             | Ŧ                           |              | H                                   | L               |                  |                  | ľ               | ŀ                                 |                |             | İ            | Ť           | t                                   |
| Develop and megate management modules  |               |             |            | 4                         | +                                    |  | +                            | +            | 7                                   | $\pm$                            | 1                | $\frac{1}{1}$                       | 1             | $^{+}$        | 1                           | 1            | +                                   | 4               | 1                | 1                | ┝               | +                                 | _[`            | ],          | İ            | Ť           | Ť                                   |
| Paper - Journal/Conference   |               |             |            | 4                         |                                      |  | +                            | +            | 7                                   | $\frac{1}{2}$                    |                  | 1                                   | 1             | +             | _                           | 1            | +                                   | 4               | $\Box$           |                  | 1               | 4                                 |                | •           |              |             | 1                                   |
| Evaluation 5 March-15 July-15  | March-15      | March-15    | July-15    |                           |                                      |  |                              |              |                                     |                                  |                  |                                     |               |               |                             |              | -                                   | 4               |                  |                  |                 |                                   |                |             |              |             | ┪                                   |
| Definition and evaluation of use cases   |               |             |            |                           |                                      |  | $\dashv$                     |              |                                     |                                  |                  |                                     |               | $\dashv$      |                             |              | $\dashv$                            | 4               |                  |                  |                 | 4                                 |                | •           |              | ┪           | $\dashv$                            |
| Evaluation result report.  |               |             |            | -                         |                                      |  |                              |              |                                     |                                  |                  | +                                   |               | $\dashv$      | 4                           |              | $\dashv$                            | 4               |                  |                  | 1               | 4                                 |                |             |              |             |                                     |
| Write-up of PhD Thesis   5   May-15   October-15   | May-15        | May-15      | October-1: |                           |                                      |  | =                            | =            | $\exists$                           |                                  |                  | $\dashv$                            |               | $\dashv$      |                             |              | $\dashv$                            | 4               |                  |                  | _               |                                   |                |             |              |             |                                     |